

Fall 1958

Volume II, Number 1

A Quarterly Journal of Fact and Opinion

Columbia University

FORUM

T. S. ELIOT TALKS ABOUT HIS POETRY

Imre Nagy: Revolutionist at the End *Paul Zinner*

Science, Time & the Cleveland Library *Polykarp Kusch*

Magic, Music and Money *Jack Beeson*

Instant Diplomacy and the New Diplomats *Dana Adams Schmidt*

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The COLUMBIA UNIVERSITY FORUM is published and sent without charge to 90,000 alumni of record, faculty members, and friends of Columbia University. As its title implies, the magazine brings together the views of individual contributors; it expresses no consensus and no institutional policy on the subjects discussed by its authors.

COLUMBIA UNIVERSITY FORUM
Fall 1958, Volume II, Number 1.
Published quarterly. Editorial and
circulation offices at Columbia
University, New York 27, N. Y.
Published at 301 N Street, N. E.,
Washington 2, D. C.
Copyright 1958, by Columbia
University. Application to reprint
should be made to
Columbia University.
Second-class mail privileges under
the Act of August 24, 1912, authorized
at Washington, D. C. Address all
editorial correspondence
to COLUMBIA UNIVERSITY FORUM,
411 Low Memorial Library,
Columbia University, New York 27,
N. Y. All unsolicited manuscripts
should be accompanied by a stamped,
self-addressed envelope. Printed by
National Publishing Company.

LETTERS

Politics and partisans

● In your Spring issue Richard Rovere charges that I don't regard the history of my own time as *contemporary* history, that I seem to have had no direct contact with it and to have been dependent entirely on *The New York Times* as a source. This is a very serious accusation to make against a political journalist. Unfortunately, it's true.

When I lived in London last winter, I noticed that I actually met trade union leaders and members of Parliament at parties and that intellectuals were part of the political life. Over here, in this too large and too specialized society, it's just as Rovere says—except for left-wing politics (a world small enough for one to cope with); a New York intellectual even in the politicalized thirties and forties had no contact with Congressmen or government officials or businessmen or labor leaders, and really did see current events mostly through *The New York Times*.

May I congratulate you most warmly on the Spring issue. It's the best bit of intellectual journalism I've seen since I got back to this country last fall. I specially liked James Fitch's "The Esthetics of Plenty" and Allan Temko's "American Architecture." I agree wholly with the thesis of the second. What a depressing place that Illinois Tech campus is; wonder what the suicide rate has been? Even Harkness Memorial Quadrangle is more human and cheerful. And I liked ["The Esthetics of Plenty"] because its author maintained his (quite justified) pessimistic attitude to the very end, with none of the usual concessions to the great American demand for something "positive" and "constructive." (See *Harper's*, *Atlantic*,

Saturday Review *passim* and *ad nauseam*.)

But the whole issue was excellent. How do you do it?

DWIGHT MACDONALD
New York, N. Y.

● Richard Rovere happens to be one of my favorite political writers of the day, but I do not think that his contribution to the COLUMBIA FORUM ["On Writing About Politics at a Safe Distance," Spring 1958 issue] was one of his happiest products from the standpoint of good taste, fairness, or accuracy.

He has hardly attained the position as a historian or a publicist which entitles him to smear Charles Austin Beard, surely one of the outstanding intellectual and scholarly ornaments of Columbia University in the twentieth century. Beard was in no sense a "crabbed old man" in his later years. I knew Beard intimately for thirty years before his death, and at no time was he ever more affable, mellow, genial, or sociable than in the last decade of his life. He may not have had much patience with diplomatic mendacity or interventionist foreign policy, but that did not make him "crabbed."

Mr. Rovere surely has a complete right to differ even sharply with Beard with respect to the views set forth in his last two volumes. But historians with a far greater grasp of the relevant facts than Mr. Rovere can justly claim regard these two volumes as the best books that Beard ever wrote. They were certainly more timely and courageous than any of his earlier volumes and were based on more meticulous research. Moreover, such new evidence as has appeared in the field since 1946 and 1948 has overwhelmingly sustained Beard's contentions and interpretations. Even taking as sour a view of their nature as does Mr. Rovere, no reasonable person would concede that they erased or effaced the enduring value of his earlier works. . . .

HARRY ELMER BARNES
1918 Ph.D., Graduate Faculties
Malibu, California

Readers will recognize Mr. Barnes as a prolific historian himself. He also served on the Columbia faculty in 1917-18.
—Editor

Wright and three wrongs

● Through an oversight Florida Southern College was mistakenly called Florida State College in my article in the Spring issue. To do justice to a small institution which had the imagination to hire Frank Lloyd Wright as its campus architect, I would appreciate your publishing this correction.

ALLAN TEMKO
University of California
Berkeley, California

● For a gentleman who must be in his thirties, Mr. Temko writes with an apparent maturity, deep sympathy and understanding which sound to me [as though they had been] translated from the German. Skidmore (Tech '25), Ed Stone (Tech '26), and I (Penn '22) were weaned together at the Deux Magots and 23 Impasse des Deux Anges, so, of course, they are leaders in American architecture today, and here I am, buckling on my dented blood-stained shield.

The big come-on in that article ["American Architecture: Down to Skin and Bones"] is . . . the great God Wright. I was hoping that, having made a man of Wright (*Harper's*, May 1958, 60 cents) without showing my hand and talking about his architecture, that everybody would let it go at that. I leave architectural appraisal to the Temkos. Just for the record, Frank Lloyd Wright is wonderful. He is Masterful. He started everything in Modern Architecture, and anything which is any good was cribbed from him . . . It's a pity and a great loss that all ten buildings chosen for posterity by the American Institute of Architects were not designed by Frank Lloyd Wright. As soon as the Law permits, he should be canonized. . . . Frank Lloyd Wright discovered plate glass, steel rib construction, tubular furniture, air conditioning, flat roofs, insulation, central core services and interior plumbing, elevators, mushroom columns, plywood, overhanging roofs, modular coordination, movable partitions, town planning, denuding of cities, suburbs, highways, clover leaves and intersections, overpasses, underpasses, and Japan. Frank Lloyd Wright is God's gift

LETTERS (Cont.)

to Architecture on earth and he looks good on television.

Everything else was discovered by Louis Sullivan except printing and the lightning rod, which were discovered by Benjamin Franklin.

Now is the time for all good architects who have used Frank Lloyd Wright as a front man, crib sheet, hero, teacher, or client to come forward and chip in a quarter to build the Mile High Skyscraper as a living memorial . . . to show what the United States might have looked like if [it] had only appreciated our Great Genius and let him take on everything and the Air Force Chapel.

Of course it's easy enough to be snide about McKim, Mead and White, Gilbert, and the other Masters . . . but if [Wright's disciples] look at themselves in the mirror, they must realize what clean-shaven, bloodless, air-conditioned ninnies they are in comparison with the photographs of their unventilated pappy. . . .

Good luck to you, and Roar, Lion, Roar.

ALFRED BENDINER
Philadelphia, Pennsylvania

As he indicates obliquely, Mr. Bendiner, a Philadelphia architect, is the author of an article on Frank Lloyd Wright in the May 1958 issue of Harper's. He also exercises his unique prose style in a monthly column in the American Institute of Architects Journal. —Editor

• Today I read two remarkably good articles by James Fitch and Allan Temko on contemporary taste and architecture in the second issue of the COLUMBIA UNIVERSITY FORUM; and today I saw a picture in a recent *New York Times* of the new Graduate School of Business building that is to replace uncompleted University Hall: and I wondered how the same institution could sponsor the best possible judgment in architecture on one hand and [on the other] be responsible for a building so inappropriate and ugly as that shown in *The New York Times*.

There are two reasonable alternatives for University Hall: to com-

plete it in something like the style [in which] it was begun—and I can understand that such piety might be expensive and fail also to make a reasonable contribution to solution of the space problem (but it would also create pleasant courts to left and right, bordered with buildings in the same style); or to put up a cube in the "skin-and-bones" style, which seems to be the only one contemporary architects can honestly and creatively work in.

But to place on that valuable site a nonentity, related to nothing around it and related to nothing contemporary, a building that reminds one of nothing so much as government "modernistic" of the late thirties (whether in Washington, Munich, or Kiev)—this would be a crime. Columbia is still the most successful urban college campus in the country; cannot the taste which produces such excellent articles for the FORUM play some role in preventing it from being ruined?

NATHAN GLAZER
Department of Sociology
University of California
Berkeley, California

Education and Mr. Barr

• Mr. Donald Barr's article, "The Trouble with Science Education," in the Spring 1958 issue, contains the kind of errors which many academicians commit when they are more eager to expound their prejudices than to investigate the facts. While the anti-intellectualism found in our schools is to be deplored, it is scarcely accurate to imply that this is the contrived product of professional educators acting more or less as independent agents. One need only thumb through the ads and articles of current popular magazines or view snatches of television to sense the enormous extent to which our society is engulfed by a desire for soft living and by soft and superficial thinking.

Some of Mr. Barr's statements and implications are so misleading that attention should be called to them.

(1) Driver training, for example, is not, as he implies, the brain child of professional educators. In one community the idea of a driver

training course was proposed to the school board on three different occasions. Those who made the proposal included representatives of insurance companies and a safety group within the community. The board turned down the proposal at its first two presentations; at its third presentation they felt bound, as representatives of the community, to inaugurate driver training. This is a familiar pattern.

(2) Mr. Barr's slurs on certain modern teaching practices are at odds with the research which indicates that a greater mastery of subject matter comes about when learning is made a rewarding, lifelike experience than when the student's psychology is ignored.

(3) His statement that first and second grade teachers almost wholly ignore the rationale of phonics is not consistent with the facts. In all the standard reading systems phonics has an important place. There is no method called the "word recognition method." He is apparently referring to the recognition of words by general shape and contour, one of four or five different approaches to the recognition of words which most schools teach and which every good reader possesses.

(4) Mr. Barr's charge that "the pupil loses his capacity to face being measured against any objective standards whatever" is surprising in view of the almost universal use of marks, standardized tests, and expectancy scores.

(5) Mr. Barr alleges that our teacher certification system is based on the psychology, not the content of education. In Pennsylvania, a typical state, a certificate for secondary school teaching may be obtained upon completion of 18 hours of professional courses. To be sure, in practice more hours than this are usually prescribed by teacher preparation institutions. Thus, at my own institution a student must complete 22 hours to obtain a secondary school certificate and 30 hours to obtain an elementary school certificate. However, the state also requires a bachelor's degree. This means, again citing my institution, that the distribution of courses is as follows: for an elementary certificate, 96 hours in liberal arts courses and 30 hours in professional courses; for a

secondary certificate, 104 hours in liberal arts courses and 22 hours in professional courses. It could be argued that too many of these hours are devoted to professional subjects. But to imply that our certification system places major emphasis upon the psychology and not the content of education is a distortion of the facts.

There are many professional educators who have been concerned about the decline in intellectual content and intellectual standards in our society and in our schools since well before Mr. Barr finished high school, and who have been fighting for years on behalf of higher standards before boards of education, state councils of education, and legislative committees.

RALPH C. PRESTON
1941 Ph.D., Graduate Faculties
Professor of Education
University of Pennsylvania

• . . . Donald Barr certainly knows what he is talking about. . . .

BERTHA GUDE
Golden, Colorado

• . . . Mr. Barr puts forth an interesting and forceful argument, but I still hope that the emphasis on science education won't cause us to lose sight of the desirable aim of having a society worth preserving, to achieve which it may prove preferable to have even more "life adjustment" courses—or more effective equivalents—than we have now.

DAVID MUSKAT
1957, Columbia College
New York, N. Y.

Front end addenda

• Hurrah for Dr. Andre J. deBethune! I am relieved to see that even one so mathematically trained will become as embarrassed as the rest of us when working at home on the income tax.

I want to offer, however, what I think is a slight simplification of some of Dr. deBethune's methods. Having had to do large quantities of simple arithmetic in recent years, I hit on a trick bordering on what he calls "front end" arithmetic, which I call "reading from left to right" (instead of from right to

left). I believe it eliminates one step in his otherwise excellent system of addition and, to my way of thinking, is considerably less complicated than his system of subtraction.

In my variation there is also a pleasant vanity angle: the method is so simple that you can do apparently extraordinary problems in your head and thus, to paraphrase Mark Twain, amaze some of your friends and infuriate the others.

I think my inspiration harks back to a vaudeville trick which I saw as a boy. Two huge numbers were written on a blackboard for addition, and a small boy without a moment's hesitation wrote down the answer from left to right.

Let us perform that trick as an illustration, using only moderately large numbers, although they could be extended to infinity:

786546
641372

1427918

The plan is to start adding at the left but always to look ahead to see whether there will be an additional 1 coming from the next column. In other words, just notice whether those next two figures will total 10 or more. Thus the 7 and 6 in the first column would add to 13 but you see from the next column that you must make it 14. The 8 and 4 get nothing from the next column, so you write in the 2. And so on.

To apply this method to simplify—slightly—Dr. deBethune's addition, let us use his example:

1384
276
3687
2566

6
16
29
23

78
113

7913

My simplification would merely be to read the final answer directly from his initial addition (second

group of figures from the top). His next addition would not be necessary unless his column was tall enough to make each row add up into the hundreds.

In subtraction Dr. deBethune resorts to the use of minus symbols. For my particular state of mathematical rustiness, this cure is worse than the disease, and I think my system is preferable. Here again I simply read from the left, this time looking ahead to see whether the next column will cause us to subtract an extra 1.

C. A. BEALS
1920, Journalism
Wilton, Connecticut

• For pity's sake don't print any more drivel like that article on "Front End Arithmetic" . . . I have read a good deal of nonsense over the years, but this is the silliest of all. In multiplying 5567.39 by .025 an entire column of "explanation" is given. Anyone over the age of twelve would simply point off one decimal place to the left and divide by 4, getting the correct answer, 139.18475. Of course this is a special case not generally applicable, but it makes the article no less ridiculous.

ALBERT L. WECHSLER
1916, Columbia College
New York, N. Y.

Additional thoughts

• Congratulations to you on the first two issues of the FORUM. I especially enjoyed the perceptive criticism by Professor Bentley of Ibsen and Dr. Clifford's keen analysis of the pitfalls that beset the unwary biographer. I also enjoyed the "Columbia Chronicle"—it certainly makes for good public relations. You do seem to be adhering to the principle that an informed alumni organization is one of the best supports that a university can have.

HELEN T. GREANY
1951, Library Service
Jersey City, N. J.

• "Soul satisfying" might best describe your magazine in this home.

DAVID M. BENFORADO
1948, Engineering
La Crescent, Minnesota



robert andrew parker

Hungary's IMRE NAGY: REVOLUTIONIST AT THE END

*Two years after the Revolution, a writer
with much new information tells the story
of its unforeseen, unlikely martyr.*

by PAUL ZINNER

The execution of Imre Nagy, deposed premier of Hungary, in June, 1958, climaxed—remarkably—a man's lifetime commitment to Communism with his death as a Hungarian hero. No less remarkable was the naïve nature of that commitment and the personal transformation that apparently ended it, the transformation of a peasant-born Party regular of no special distinction into a man proud enough to invite martyrdom before his country and the world.

That the secret trial which doomed Imre Nagy and three close associates (a fourth died in prison) came when it did and imposed such extreme penalties on the chief defendants suggests an act of terroristic propaganda aimed beyond Hungarian borders. Held in the midst of acrimonious debate on the issue of unity and diversity in the "socialist camp," the trial was obviously addressed to a Communist audience—primarily to Tito, but warning Communists everywhere of the consequences of ideological deviation. That Nagy was used to personify deliberate political heresy has its ironic, even its sad aspect.

The charges for which Imre Nagy was condemned to death name two separate criminal acts, "preparation and unleashing of the counter-revolutionary uprising" and "treason" during the Revolution in his denunciation of Hungary's adherence to the Warsaw Pact. The latter crime, a thoroughly reported, public act of statesmanship, would appear the more serious. But in fact Hungary's withdrawal from the Warsaw Pact provided the USSR with a convenient pretext for enforcing "the fraternal assistance of the Soviet Army, which carried out its international duty [by intervening in Hungary]." Nagy's accusers were far more concerned with a movement in Hungary of long-term ideological deviation, a movement which inspired the Revolution and which, in their words, led to Nagy's "final act of betrayal."

Paul E. Zinner interviewed refugees from the Hungarian Revolution throughout Europe in 1957 as a member of the Columbia University Research Project on Hungary. An assistant professor in the department of public law and government and the Program on East Central Europe at Columbia, he holds degrees from Harvard.

The indictment portrays Nagy as the central figure in a vast conspiracy, purposefully directing and guiding the activities of his followers to undermine Party unity and overthrow "the people's democratic system." It relies heavily on a written tract of his to demonstrate the existence of an elaborate theoretical framework underlying the Revolution. Patently falsifying events, the indictment gives Nagy credit for intelligence and daring that he simply did not possess.

The image it draws of him differs sharply from the much more moderate descriptions of his actions given by Soviet Communists immediately after the Revolution. They described him as a well-meaning but weak and bumbling leader. The indictment also disagrees with a casual appraisal by K. Y. Voroshilov, who in August, 1958, called Nagy "a fool" and "no Communist at all" and admitted that his execution could perhaps have been avoided.

Needless to say, both descriptions distort Nagy's personality, the motives underlying his behavior, and the manner of his actions. He could not have been either the conniving schemer or the fool he was made out to be. That he ceased to be a Communist at the very end of his active career as a politician is, however, very likely.

The trial is regarded—in Hungary and elsewhere—as a long-delayed sequel to the Revolution of October, 1956. It was neither the first nor the last quasi-judicial act of reprisal against Communists and non-Communists alike who fomented, aided, or fought in the Revolution. But since it involved a central figure in the Revolution, the trial once again sharply focuses attention on the many intricate and so far inadequately explained circumstances that accompanied the dramatic events of October, 1956, and the extraordinary role played in them by Imre Nagy. Only rarely does the personal tragedy of a lifelong Communist leader also epitomize the tragic fate of a whole nation. Few if any Communists have died as martyrs of their people.

The composite image of Imre Nagy that emerges from scrutiny of his career, his writings, and from a variety of comments and reminiscences by persons who claimed his friendship or acquaintance and others who simply had an opinion about him is complex and mystifying. There are gaps in the story of his career. But

two things stand out from all accounts of his personality—his attractiveness as a human being, quite apart from his Party affiliation and the political philosophy to which he subscribed for the better part of his adult life, and his abysmal lack of understanding of the tough realities of politics, despite fifteen years of exposure to the practice of Bolshevism in the Soviet Union. Even his non-Communist critics readily agree on his honesty and good intentions. They speak of him with pity rather than anger. Most of the comments made about him express compassion for the predicament into which he was thrown by events and circumstances beyond his control.

For he was not the originator of the intellectual ferment that preceded the Revolution, nor was he a self-appointed leader of the insurgent forces. He was a *symbol* of opposition to the tyrannical Communist regime of Matyas Rakosi and Erno Gero rather than an agent in conducting the struggle against it. The prominence he enjoyed, in one way or another, without interruption from 1953 until his death, was not quite of his own devising. He neither sought power nor knew very well how to handle it when it was thrust upon him. Worse, the conditions under which he was called to head the government after the outbreak of the Revolution left him little freedom of action. Once called, he courageously decided to see things through and act as spokesman for the demands of his people, which he considered just, rather than to desert them—though he is reported to have held the view that the Russians would never accede to the terms of independence demanded by the insurgents and would crush the Revolution. As one escapee put it, what European statesman, regardless of party affiliation, could have done better under the circumstances?

Nagy was catapulted into the limelight in June, 1953, when he became Hungary's prime minister at the behest of the Soviet leaders. The exact reasons why they chose him are not known. The fact that he could not be identified with the worst features of the Stalinist terror of the preceding five years and with its chief exponent in Hungary, Matyas Rakosi, undoubtedly made him an attractive candidate. But equally serious consideration must have been given to his impeccable record as a Communist.

He joined the Party in 1918 at the age of 22, as a war prisoner in Russia. Following a sojourn in Hungary, he emigrated back to the Soviet Union about 1929 and remained there until 1944. He was thus a "Muscovite" through and through, for he had spent long years in training in the Soviet Union. As far as is known, he weathered every political crisis there without a serious black mark against him. At any rate, he was neither imprisoned nor deported to Siberia. His professional interest in agriculture may have sustained him, although others with equally non-political careers fared less well than he did.

On returning to Hungary, he was a natural choice for the post of minister of agriculture. He held that position from December, 1944, to November, 1945, during the crucial stage of land reform and land distribution. He then briefly held the portfolio of Interior before relinquishing it to Laszlo Rajk. His fortune declined after 1948, when he allegedly was in conflict with the Party leadership over collectivization policies. He held no cabinet position until 1950, when he was appointed minister of crop collection, and although he was not formally removed from leading Party organs, witnesses say that he did not exert much influence in them and was dropped from the secretariat for three years, between 1948 and 1951.

Reappointed in March, 1951, he became a deputy prime minister the following year. Thus he did not rise to the premiership in June, 1953, from total obscurity. But he wielded little or no power in high Party councils. His recovery and rise during one of the harshest phases of Communist rule in Hungary only heightens the mystery of his political progress.

From 1953 on, the name of the plain-spoken premier was inseparably linked with the so-called "new course"—a program dictated by the USSR and aimed at easing some of the political injustices and economic hardships imposed upon the people during the previous era. His speech before the Parliament on July 4, 1953, in which he outlined the program of the "new course," was remembered by Hungarians as a "breath of fresh air" in a fetid atmosphere. It was inevitable that he should become the focal point of new hopes raised by the moderate program which he advocated and in which he believed. By the same

token he was bound to incur the enmity of the entrenched Party leadership whose policies and behavior came under sharp attack at this time. As fissures deepened in the Party, fissures that eventually led to its breakdown, Nagy became firmly identified as not only a partisan of the "new course" but as the leader of a reform faction, one opposed to the old Party guards. Despite his reluctance to lead and his obvious devotion to the Party as an instrument of power, he could not escape the label of "opposition leader." It hounded him for the rest of his life.

Those who observed him say that what stood Imre Nagy in good stead with the Hungarian people was his "closeness to the soil." His looks, demeanor, and style of speech retained a "Hungarian country flavor." His folksy and seemingly forthright public manner was his greatest charm, and he was frequently described as an "intelligent peasant." He alone of the entire Communist political leadership was referred to by familiar and endearing epithets such as "the old one" or "Uncle Imre." An understanding of peasant problems and sympathy for the countryside enhanced his popularity most especially among the younger Communist and non-Communist intellectuals in Hungary. It was these younger intellectuals who were in fact the spiritual progenitors of the Revolution. Nagy was able to understand their common inspiration: a devotion to Hungarian village life, which led them to search for an equitable solution to Hungary's social and political problems through the peasantry.

Because of his extraordinary and anomalous position as prime minister of a Communist government and standard-bearer of reform, Nagy naturally seemed all things to all people. His actions and motives were interpreted to suit individual predispositions. If he was distrusted because of his Communist affiliation, he was trusted as a man clearly set apart by character from the despised Hungarian Communist leadership.

In March, 1955, Communist opponents of the "new course" seized on an opportunity presented by a shift in command in the Soviet Union and ousted Nagy from the premiership. Automatically his reputation and popularity as a symbol of opposition rose after the ouster and his sub-

sequent expulsion from the Party. Enforced idleness provided him with valuable time to mull over problems of political theory that he otherwise would have had to forego. His famous theses on Communism—later published in book form in this country as *Imre Nagy on Communism* and used by his accusers against him—were written during this period. Drafted for the consideration of the Central Committee of the Hungarian Communist (Workers) Party, they constituted a defense of his policies while in office, a refutation of attacks made on him by his opponents, and a plea for reinstatement in the Party. Couched in Communist jargon that often distorts or obscures the meaning of his statements, these articles nevertheless convey a sense of his thought as of that time. What they show is a mind hard at work trying to reconcile deep devotion to Marxist-Leninist theory and loyalty to the Communist Party with a felt necessity for a new morality in politics, a necessity he recognized after critical examination of the record of Communism in Hungary. But there is no hint of any desire to overthrow “the people’s democratic regime” or to deprecate its worth if properly managed. At most, his articles contain unmistakable warnings of impending disaster unless the system mends its ways.

Nagy assailed “the degeneration of power—the appearance of Bonapartism” and held that “the predominance of Bonapartism—of the personal dictator—and of the instruments of force is not compatible with the constitutional legal system of the People’s Democracy, with its legislature and government, with the democracy of our entire state and social life.” He saw two ways in which the Communists could extricate themselves from the

disastrous situation brought upon the country by the Rakosi regime: we can either liquidate Stalinist policy ourselves in good time and lead the country back to the June road [i.e., the new course] by which we shall be able to avoid economic and political failure; or we can refrain from changing the course of events with the result that the increasing tension may bring the country to the verge of a grave crisis.

The basic principles that were to govern public life in Hungary were, according to Nagy, simple indeed. They included adherence to ordinary ethical and moral standards, observance of legality—that is, of firm juridical norms—and

recognition of the right to national self-determination. He spoke of “eternal moral precepts and laws of progressive mankind” and wrote that “the party of the working people . . . must be the embodiment of social ethics and morals.” He argued that “the present policy of the Party leadership . . . is actually making capitalism seem desirable in the eyes of the masses” and asserted that the “rejection of the virtues of patriotism and national sentiment by its very nature stirs up . . . chauvinism. Socialism should not deprive the people of their national character nor of their national sentiments and qualities; on the contrary, it is with these that people enrich the universal moral-ethical value of socialism.”

He developed an ingenious case for applying to all countries the “five basic principles that were first explained at the Bandung conference by the representatives of the Chinese Republic and India, Chou-En-lai and Nehru.” According to Nagy,

the five basic principles do not spring from differences between the two systems—capitalism and socialism—they do not express this difference, but they are factors independent of social and political relationships in the international field. . . . The principles that govern the relationships between countries and peoples do not touch the interests of only one or another social stratum, but affect the fate of the entire nation. . . . Such national policies can be carried out only by a nation that possesses national independence and sovereignty, and thus can protect its liberty and equality against other peoples and does not permit interference in its private affairs.

Harking back to “the ideals of Kossuth [the great Hungarian revolutionary patriot of 1848] in the sphere of international relations,” Nagy affirmed that the absence of sovereignty “makes the internal and external situation of our country very precarious and wavering.”

Such ideas were of course thoroughly heretical. The introduction of common denominators in internal as well as international politics between capitalist and socialist states is about as far as one can go toward destroying the operating principles of Communism. The extraordinary thing is that Nagy himself appears to have been unaware of the incompatibility between his common-sense thoughts and the accepted tenets of Leninist doctrine. He simply failed to see that his ideas tended to undermine the leading position of the Communist Party in Hungary (which position he himself wished to preserve) and

to violate the requirements of "proletarian internationalism" which call for subordination of national self-interest and self-determination to the welfare of the "whole socialist camp" as dictated by its leader, the Soviet Union.

Nor did Nagy keep his ideas to himself. His company was sought by a varied clientele of authors, journalists, artists, university teachers and students who wanted his advice and drew him out. Through them Nagy came in touch with, among other groups, the Writers Association and the Petofi Circle, who opposed the incumbent Communist leadership and agitated for its dismissal. His villa became a busy center of intellectual exchange, resembling a salon in pre-Revolutionary France.

But in no sense was Nagy the mastermind of an organized conspiracy against the Party. His ideas did not dominate the opposition elements. By their own accounts, many adherents to these progressed a good deal further than he did in their plans to modify the system of government. Nagy continued to profess belief in the soundness of "Marxist premises."

He was willing to accept the explanation that the faults of the Communist system as they were known to him were due to the personal peculiarities of Stalin and Rakosi. Others around him had long since decided that the entire system was bankrupt and told him so. Far from being the intellectual leader his Communist detractors have made him out to be, he often lagged behind developments within the very "camp" that he ostensibly ruled. But by virtue of his record he could not escape being labeled the chief spokesman of the Communist opposition and also as qualified to speak on behalf of the muted masses. In the spring and summer of 1956 his appearances in public—and they were frequent—almost always assumed the character of a political demonstration. He often used public conveyances to travel from his suburban residence to the center of town. It was a sign of the esteem in which he was held that bus drivers stopped their vehicles out of turn to pick him up on the street wherever he happened to be.

As the crisis in the Hungarian Communist Party moved toward cataclysm, Nagy's reinstatement to Party membership was ever more vehemently demanded. The manner of his restoration in the middle of October was a measure of

the man's incorrigibly self-effacing character and his lack of any strong sense of leadership. At a time when he should have rallied forces around himself, he abjectly awaited full-dress debate of his previous dismissal before the Communist Central Committee.

The mass demonstrations in Budapest on October 23 found him virtually alone and quite unprepared, without a platform, without a plan of action. The circumstances of his being called to address the people assembled before the House of Parliament and his subsequent reappointment to the premiership are still not clear, nor is the history of the first few days of his tenure. He is said to have been under AVO (secret police) supervision. To what extent he was a prisoner in the true sense of the word, no one is prepared to say. After three or four days, however, when the Communist control apparatus collapsed completely, he extricated himself from whatever restrictions had been placed on him and began to act. By this time he could do little but heed the demands of the insurgents, hope to ride out the crest of the revolutionary tide, and then try to assert his authority as best he could.

It will never be known how good his chances might have been to remain in office had the Revolution been victorious. The second Soviet intervention on November 4 forced him to seek asylum in the Yugoslav Embassy. On November 22 he was arrested when he left the Embassy on what was presumed to be a safe-conduct guarantee by the Kadar government. He was jailed in Rumania and tried in Budapest in June. But his refusal, according to the official announcement of the trial, to "recant" and admit to the false charges brought against him completed his political—and his personal—transformation. Rejecting this last opportunity to betray the Revolution—and thus perhaps to bargain for survival—he carried out his first heroic act of statesmanship.

Imre Nagy was not a man whose death might have been expected to dramatize the suffering of an entire people. Only he, and at the last moment, could have made it do so. Whatever the motive behind his refusal to bargain, it was he who sealed the world's memory of the Revolution, a Revolution he could not have inspired, could never have controlled, but, by his last action, sustained in the minds of men.

T. S. Eliot talks about his poetry

On April 28th last, T. S. Eliot gave a poetry reading to an enthusiastic audience of members and friends of the University. His audience more than filled McMillin Theater. Dean Jacques Barzun, who had arranged for the reading on behalf of the Graduate Faculties and Barnard College and who presided over the gathering, pointed out that almost exactly a quarter century earlier, to the day, Mr. Eliot had stood on the same platform to deliver his famous lecture on Milton. This time, Mr. Eliot read only poems, but he prefaced them with informal comments which he has kindly allowed the FORUM to print virtually as he spoke them. The poems themselves are well known.

Before the reading proper, Professor Lionel Trilling said the few words of introduction which we print ahead of Mr. Eliot's extempore remarks.

MR. TRILLING: Mr. Barzun has suggested how absurd it would be to think of introducing Mr. Eliot to this audience, or to any audience. And indeed what is really needed on an occasion like this is some way of *de-introducing* Mr. Eliot—I wish there were some formula that I might utter that would for a while remove from our minds all our intense awareness of Mr. Eliot's achievement, all recollection of our

agreement or disagreement with his doctrinal positions in criticism or religion or politics, all memory of the lectures about his work we have given or heard and of the essays about him we have written or read. I should like to see us for a little time wrapped in a cloud of unknowing, such as used to envelop us, or some of us, a good many years ago.

Somewhere in my university office is a copy of *The Dial* for November 1922, in which *The Waste Land* first appeared in this country. I can remember how I read it—with some resentment, in a fever of incomprehension, having only the sense that it was important and very moving, that it was about my own life and the unhappy epoch that I, as a Columbia College sophomore, was condemned to live in. There were no notes of any kind, not even Mr. Eliot's, although these were promised. I knew enough Latin to understand that the Sybil in the epigraph was in a bad situation, but no Greek to know what question the boys put to the Sybil, nor what she answered them. It did not very much matter—it did not matter that I could not understand the poem. After a little while there came to the help of my incomprehension the theory which then prevailed that the poem was to be understood as music is understood, that the best way to perceive what was going on in the poem was to read it aloud, and that it did not matter if one failed to understand in a precise way this allusion or that. It was a simple theory and an inadequate one, but it was essentially correct. Whoever first reads the poem, or any of Mr. Eliot's poems, according to that prescription cannot go far wrong. But the inadequacies of the simple theory had to be supplied, and they were supplied, and now *The Waste Land* has been glossed and annotated by a hundred busy and competent hands. Not an allusion but has been tracked down and securely nailed to the floor. And the same devoted effort has been directed upon all of Mr. Eliot's poems—can we doubt that on some American campus at this very moment some graduate student is preparing a theoretical basis for our understanding of the *Practical Cats*?

That the work of explication needed to be done there can be no doubt. Yet as Mr. Eliot himself has become increasingly aware, the explicatory impulse began to stand in the way of

his poems. And over recent years, in one way or another, he has in effect said what Wordsworth once said: "Must eyes be all in all, the tongue and ear Nothing?" It might of course be objected that his protest against being understood only through ideas and images is a compromised one—if he had wanted to be understood immediately and emotionally he should not have written difficult poetry. Yet whoever has responded to Mr. Eliot's poetry knows that sound plays as great a part in it as ideas and images, that there really is to be heard in it the most subtle of all musics, the music of thought and the music of feeling, that Mr. Eliot is telling the literal truth about the nature of the poetic process when in his essay "The Music of Poetry" he says, "I know that a poem, or a passage of a poem, may tend to realize itself first as a particular rhythm before it reaches expression in words, and that this rhythm may bring to birth the idea and the image."

Mr. Eliot is said to have said that for his poetry he would prefer an illiterate audience. It is not for me to say whether or not we have provided him with what he wants. I leave it to each one of you to show Mr. Eliot the hospitality you would wish to show him by making yourself for this evening if not illiterate—that is perhaps beyond your powers—then at least as simple and direct in your response to what you hear as he would desire.

MR. ELIOT: Ladies and Gentlemen: It is some three years since I have read any of my poems in New York. It is longer than I care to remember since I had the privilege of reading to Columbia University, and even then I don't think I had the additional glory of speaking to both Columbia and Barnard at once. It was so long ago, it occurs to me that perhaps I may have been reading then to the fathers or the mothers—or to the fathers *and* the mothers—of some of the present audience. At any rate, I should like to think that there are some of the present audience who have never heard me read before.

Now this isn't because of the comparative penury of my output of poetry. If you have heard me before, you may hear some of the same tunes again. I think on the whole that in one respect to have rather a small volume of poetry to choose from has a certain advantage;

it gives me the hope that a large part of the audience will have read, and will be more or less familiar with, some of the things that I am reading. And I think that it's always interesting to hear an author read his own poem if you know it already and can compare his interpretation of it with your own.

To those who may hear poems that they've not read, I should like to say for their consolation that I myself can never understand a poem when I hear it. I can't understand a poem until I've read it to myself. All that I get from hearing a new poem is—I may say to myself, "This sounds interesting, I would like to read it." So I hope that I'll give that at least to those who may hear something unfamiliar.

But the chief reason why I hope that some out of this audience are hearing a few poems for the first time is not that I shall read the same poems I read before, it is that I shall make the same preliminary *remarks* that I have made before. There are certain things that I always say when I give a reading, and anyone who has heard me already will have heard them before, and anyone who ever hears me again will hear them again. They've really been reduced to what seem to me the essentials.

I'd like to explain in the first place that when I read my poems, I read them in chronological order. They fall into certain definite periods, between which there are gaps indicating a sort of state of mental drought when I didn't expect to write anything ever again.

Then, as I always say, I read the best, I think, the poems that I've written most recently or which are least remote from my present existence; so that I always believe that I read rather better toward the close of the evening than I do at the beginning. I've almost lost touch with the man I was when I wrote the early poems.

The other thing is that I occasionally make remarks in between poems or groups of poems. I do so for the purpose of separating one poem or one type of poem from another, and of giving you, the audience, an interval in which to rest and clear the previous poems away from your minds before you hear the next. I think that it can be extremely fatiguing and in the end make no effect at all if a man just reads his poems straight ahead without making any comment. So you are to take these comments merely

as necessary interruptions or intervals, and you need pay no more attention to them than they command from you.

Now, there's one other remark to make, and that is to compare direct poetry-reading like this with the gramophone record. I've made, as other poets have nowadays made, gramophone records of a large number of my poems, and I've taken some trouble over them, and I've learned a lot from doing so about enunciation. The question is, is there any advantage to a live reading—in which the author is standing in your presence reading to you—over a gramophone record? Well, there are two reasons, I think, why a reading is different from a gramophone record.

In the first place, when you're making a gramophone record, you are very much on edge to avoid slips. Your chief anxiety is not to do anything wrong, whereas when you're reading directly to an audience, you're not worrying so much about making slips or doing something wrong, but you're anxious to get something positively right. A gramophone record may have no mistakes in it, but at the same time the anxiety to avoid mistakes rather prevents one from expanding as one sometimes does in front of an appreciative audience. The other reason is that I've found it impossible to do recording for more than twenty minutes at a time because the strain is so great in recording that fatigue in the voice begins to show after that time. Therefore, a gramophone recording such as I make is made up of sections which are put together; having made the sections myself, I can often detect the joints where I left off one day and began another day, perhaps halfway through a poem. When one is reading to an audience one may make mistakes and they don't matter, but one has the opportunity of occasionally rising to one's very best, an opportunity one hasn't in recording.

Now, in a public reading my remarks in between poems become less and less necessary except as interruptions, because there are so many people nowadays who understand my poems better than I do and have explained them to other people, to the world, and to me. And sometimes my poems turn out to be much more unpleasant than I thought they were. But I'll try to say something here and there merely to give you a breathing space between poems.

Now, the first period of which I shall give specimens is the period up to, say, about 1914. That was a long time ago. I shall read you "The Love Song of J. Alfred Prufrock." I wrote it a long time ago and perhaps I don't read it as well as I would have done a long time ago, because I like some of my later poems better. However, I'll do my best by it because I know there are people who like it better than some of my later works. I shall read one other poem of the same period, "Rhapsody on a Windy Night," which I don't think I've ever read to an audience, so that will be rather an experiment. But I'll begin with Prufrock.

(Mr. Eliot read "The Love Song of J. Alfred Prufrock," remarking afterward...)

There is one thing I might say about Prufrock. Some years ago a scholar wrote an article about it in a learned journal. He made a rather interesting discovery. He discovered something that I hadn't been aware of myself: that before writing Prufrock, I had been reading and had been very much influenced by Dostoevsky's *Crime and Punishment*. He produced parallel passages which quite convinced me—because I knew that I had been reading *Crime and Punishment*. Unfortunately, he went on to prove something which wasn't so. As the English translation of *Crime and Punishment* by Constance Garnett appeared in 1914, he inferred that Prufrock had been written in 1914. If he had written to ask the author, he would have been told—as he was later, having sent me an offprint of his article—that I had read *Crime and Punishment* in the French translation, which appeared, I think, in 1909 or 1910.

"Rhapsody on a Windy Night." This was written in Paris in 1910 or 1911. I don't know very much about it now. If it needs any explanation, I must leave it to others to explain. But I don't think I've ever read it to an audience.

(Mr. Eliot here read "Rhapsody on a Windy Night...")

I can't explain that now. . . I recognize the geraniums; they were Jules Laforgue's geraniums, not mine, I'm afraid, originally.

Now the next period, which is, say, 1915 to 1919, includes several poems in quatrains, dealing with a man named Sweeney and other people. These poems were largely influenced by Ezra Pound's suggestion that one should study

Théophile Gautier and take a rest from *vers libre* in regular quatrains. Part of the outcome of this was the poem, which I shall read, called "The Hippopotamus." This is a poem which I originally read, I remember, at a poetry reading for the benefit of some Red Cross affair with Sir Edmund Gosse in the chair, and he was profoundly shocked. On the other hand, the late Arnold Bennett liked it better than anything I'd written up to the time of his death, and kept asking me to write "another Hippopotamus."

Thirdly, it's the only poem of mine which I've any reason to suppose that James Joyce ever read. Once when I saw him in Paris he told me that he'd been to the Jardin des Plantes and had paid his respects to my friend The Hippopotamus. I imagine that he may have read this poem. However, it doesn't seem as shocking to anybody now, I think, as it did all those years ago; I think very few things do remain as shocking.

(Mr. Eliot here read "The Hippopotamus.")

Of course, things do come back on one. A good many years later I became a churchwarden, and I often thought of those lines, ". . . The True Church need never stir/ To gather in its dividends," when we were wondering how to keep the church going on the collections, which weren't quite so good as one would have liked. So one lives and learns.

Now I'm going to try another experiment. We come to the third period and *The Waste Land*. I'm going to see if I can read "A Game of Chess," although it seems to me that my cockney accent isn't quite good enough. On the other hand, I was encouraged the other day when someone told me that my recording of this seemed to them very good. Even if my cockney accent isn't good enough, I hope that I'll convey something by reading this which wouldn't otherwise transpire.

(Mr. Eliot read "A Game of Chess," following it with the section of *The Waste Land* entitled "What the Thunder Said.")

At this point there is a rather important

break in my work for several years; so before going on, I choose to read a poem of a very different sort, which comes from a later period still; in fact, which doesn't really belong to any particular period. It's from *The Book of Practical Cats*, and it is called "Growltiger's Last Stand."

(Mr. Eliot read "Growltiger.")

We now come to 1929—"Fragment of an Agon," which I don't often try. Again, I'm doing something I don't usually do. You'll just have to imagine the different speakers. I can't stop to indicate who is saying what, but Mr. Sweeney is saying most of what's of any importance. This was a work I never finished because it has to be spoken too quickly to be possible on the stage, to convey the sort of rhythm that I intended. It was much too fast for dialogue, really.

(The speaker here read "Fragment of an Agon," and the fifth section of "Ash Wednesday.")

I think I'll read two of the Ariel poems. I'd like to read one which came much later than any of the others, indeed later than any in my collected volume, which I wrote about three or four years ago, more or less to order.

(Mr. Eliot read "The Cultivation of Christmas Trees" and the short poem entitled "Lines for an Old Man.")

I should like to read one chorus from *Murder in the Cathedral*, and then I'm afraid I must read one whole Quartet. [Applause.] I will read the opening chorus to the second part of *Murder in the Cathedral*. This wasn't in the original production, but was introduced later because it was thought that if the first part opened with a chorus, it would be more symmetrical if the second one did so. Then I should like to end, if I may, by reading the whole of "East Coker," the second Quartet. All the last three Quartets are in a sense war poems—increasingly. "East Coker" belongs to the period of what we called the "phony war."

(Mr. Eliot read the last two poems, thanked his audience for their attention, and received their applause.)

The Theatre Is Losing Its Minds



by ROBERT BRUSTEIN

Our best minds slight it, says this writer.

—No wonder American drama is thin stuff.

For a long time now, that persuasive but much-maligned minority of intellectuals who arbitrate literary taste in the quarterlies, on the lecture platforms, and in the classrooms have been slighting the theatre. Some still go to the ballet, a few more to the opera; a dwindling number attend movies, chiefly foreign films; and a larger group than will confess it watch television secretly in the sanctuary of their studies. But if the theatre had to depend on the patronage or interest of men of mind, it would quickly close its doors.

Modern drama occupies for many intellectuals a dubious middle ground between high art and mass culture which renders it automatically suspicious, worthy neither of serious nor of phenomenological consideration. To mention the name of a current playwright at a literary party is to invoke a moment of embarrassed silence. The drama has become the dirty Cinderella of the arts, visited in her ashes by princes and courtiers but shamefully neglected—even disowned—by members of her own literary family.

The American intellectual, when not indifferent to the drama, is often simply hostile to it. The standard response to the theatre in intellectual journals is a scream of pain accompanied by a hurried assertion of values. Today, a number of literary quarterlies have theatre chronicles, but these are mostly infrequent, capsulized, and dismissive. According to Mary McCarthy, long the drama critic for *Partisan Review*, it was due to a freak of fate that her chronicle appeared at all. In the foreword to her collected theatre pieces, *Sights and Spectacles*, she writes that she got her position with difficulty, since "some of the editors felt that the theatre was not worth bothering with." Her own critical method was dictated by the (probably correct) feeling that "most of our readers never went to the theatre." In consequence, she concluded that the "safest position was to remain always on the attack." For readers whose dislike of the theatre was already firm, this was the safest position indeed, but it was hardly the most salutary.

Admirers of Miss McCarthy's criticism have

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been amused by the sharpness of her style, the cogency of her observations, and the deftness with which she punctured overinflated reputations. Considering the state of contemporary drama, it would be hard to quarrel with most of Miss McCarthy's opinions. My uneasiness, however, is not over her opinions but over her tone. I have the feeling that she often withheld from herself and her readers her moments of delight in the theatre; otherwise we must conclude that her dislike touched not only certain plays but the theatre as an institution—her writings reflect unrelieved torment over almost everything she saw. It is the function of the critic to be perpetually dissatisfied with works which fall short of a high ideal, to point out the direction in which an art form can profitably go, not to discourage interest in it altogether. I know of no one who could truthfully say that Mary McCarthy excited them with any new belief in the possibilities of the drama.

Miss McCarthy's Juvenalian scourge was fashioned, I think, less out of her own inclinations than out of the demands of the *Zeitgeist*. She is merely one, the most gifted one, of a large group of writers who, when they turn their attention to the theatre, invariably plant bombs under it. The technique of satiric demolition seems to be reserved especially for consideration of plays, probably because the writers know that theatre people, who rarely read anything anyway, are not influenced by the literary quarrelries. But by calling attention to the critic's style rather than to the object discussed, this technique emphasizes the writer's conviction that the theatre is unworthy of serious consideration.

What accounts for the intellectual's indifference to the theatre? He has many objections, and a good many of them are justified. He feels, most of all, that American theatre is devoid of ideas. The emotional bias of the drama is no new thing in America. More than a hundred years ago, Alexis de Tocqueville observed:

Most of those who frequent the amusements of the stage do not go there to seek the pleasures of the mind, but the keen emotions of the heart. . . . Accuracy of style is therefore less required, because the attentive observance of its rules is less perceptible on the stage. . . . You may be sure that if you succeed in bringing your audience into the presence of something that affects them, they will not care by what road you brought them there, and they

will never reproach you for having excited their emotions in spite of dramatic rules.

Things have not changed much today. The highest compliment even the most intelligent theatre patron pays to a play is, "It moved me." Most of the long-term American shows in New York, described by such incandescent hyperbole as "magical," "magnificent," "brilliant," "exquisite," "overwhelming," "absorbing and real," and "superb," are little more than pedestrian, badly written affairs which have managed to excite the emotions of the reviewer and the spectator a little without at all disturbing their intellectual peace. But although this is unfortunate, it is neither astonishing nor symptomatic of a decline in civilization. We should now be used to the fact that democracies produce a lot of art that is worthless and shoddy. Henry James, writing serious theatre criticism during one of the dreariest periods in American drama, saw that one must suffer the trash in order that a few good plays may be "floated to the front." The hit plays of each year are certainly less depressing than the ten best-selling novels of each week; yet few intellectuals despair of literature as they despair of the drama. It is right to be dismayed by the general run of democratic culture, but it serves no purpose to turn one's back on the forms that produce it.

For the fact is that the American drama now seems at least somewhat more open to the expression of ideas than it was in Tocqueville's time. It must be admitted, however, that these ideas are generally simplified or falsified. Rodgers and Hammerstein, for example, feel compelled to drag a subplot dealing with miscegenation into their musical fantasy, *South Pacific*, but they make sure they concern themselves with marriages between Americans and Polynesians (a really hot problem these days) and finally back off from the whole mess anyway; William Inge, in his latest play, *The Dark at the Top of the Stairs*, can dispose of the "problem" of anti-Semitism by treating a "Jewish" character who bears not the slightest resemblance to a Jew; Eugene O'Neill writes a Freudian play (*Strange Interlude*) without, apparently, ever having read Freud; Thornton Wilder vulgarizes Joyce; and Arthur Miller persistently stubs his toe against politics.

The inadequacy of the ideas in our theatre

sometimes seems worse than no ideas at all, especially when one has been squirming for three hours in an expensive seat. But it is possible to hope that the theatre may soon be open to ideas of greater weight and complexity. If the American playwright has been impervious to the more complex ideas in circulation, that is partly because the intellectual has for so long held him *non grata*. The unhappy split between the literary and dramatic in this country can work both ways.

It is understandable that, rather than impose new and dissonant ideas on the public, most playwrights have been content to mirror the ideas which will give them majority approval. After all, their livelihood depends on the applause of the greatest number. But it is no longer any secret that American theatregoers are the most passive in the world, unwilling to make a move toward a play until the seven daily drama reporters in New York have first pointed the way. These reporters, probably without meaning to, have gained a stranglehold on the theatre unique in our culture. (Can you imagine *Time* magazine or *The New York Times* alone determining whether or not a novel was read?) The power of these reporters, affecting the audience, affects theatre people as well. At the opening night party of *Look Homeward, Angel*, Hume Cronyn climbed onto a chair and read aloud, with all the resonance of a pastor addressing his flock with the words of God, the notices of Brooks Atkinson and the *Herald Tribune's* Walter Kerr. The company listened with reverence, not through respect for the reviewers' superior powers of observation but through recognition of their power to regulate success or failure.

Considering the fact that the daily reviewers have become almost the exclusive arbiters of taste in the theatre, it is little wonder that a play is kneaded, molded, rewritten, and re-written until it becomes an inoffensive object that agitates no one. It is deplorable that any criticism, whether good or bad, should exercise such a prohibitive influence on an art. But it is less easy to alter this fact than to provide an alternative opinion which might help raise the standards of taste. I do not think it is Utopian to suggest that if intellectuals regarded the theatre with more affection and less contempt, they might soon come to exert more influence on it.

There is much that is noteworthy in the thea-

tre today. The off-Broadway movement in New York has gained in force and prestige, managing sometimes to attract the finest artists and plays. The Phoenix Theatre, after many years of groping, has established an intellectual identity; the New York Shakespeare Festival has for two years staged free, first-rate productions of Shakespeare's works; a New York theatre solely devoted to the plays of Chekhov existed until very recently; and at the time of this writing, one can see, without too much strain on the pocketbook, plays by Ibsen, Machiavelli, Beckett, Ionesco, Synge, Brecht, Joyce, Wedekind, and Lorca.

I do not mean to imply that the theatre is flourishing. Too often the minority theatre is little more than a carbon copy of what is going on uptown; too often it is hopelessly amateur. But when you consider that these plays are often produced in the face of open hostility by the daily reporters (Louis Calta, the off-Broadway reviewer for *The New York Times*, for example, has in the last two years dismissed as "dated" plays by Shakespeare, Ibsen, Moliere, Farquhar, and Wycherley), you will see that there is a strong impulse towards an alternative theatre which transcends economics, the hit-happy audience, and the inevitable critical response. But this impulse can be lost in a sea of intellectual indifference. Among influential intellectuals, only Eric Bentley has reviewed off-Broadway productions with affection. By his encouragement, and by publishing a series of unusual plays for off-Broadway companies to produce, he has demonstrated how powerful intellectuals can be in determining the course of the drama.

It may at this time be justly charged that a few revivals and some exciting new plays from abroad do not constitute a valid American theatre movement. Where are the native playwrights willing to experiment creatively with forms and ideas? Alas, they have not yet appeared; there is at present no such thing as an American theatrical avant-garde. It is one of the curiosities of our culture that few playwrights of talent are permitted to remain long in obscurity. After too short a time they are appropriated by Broadway and subjected to that peculiar process of corruption known as writing a hit play. Those playwrights who might have developed in interesting directions often spend the greater part of their careers trying to repeat

their initial successes.

On the other hand, a hospitable theatre climate, such as off-Broadway is beginning to provide, will make the appearance of an American avant-garde more likely. With the opportunity to see productions of the best drama Europe has to offer, it is to be expected that the young American dramatist, having imaginative models before him, will be more willing to experiment. Some are already showing discontent with the exhausted ideas that continue to satisfy Broadway. It was through foreign productions at the Théâtre Libre that nineteenth-century French drama was revived, and it was partly because of productions of Ibsen at London's Independent Theatre that Shaw was encouraged to write. But something else is needed as well, and that is an atmosphere in which the young writer is not made to feel that the drama is an inferior form, or that it is impossible to write well in it.

There is no denying the fact that, up to now, the best American writing has not been done in the theatre. But if American dramatists are guilty of more literary lapses than novelists, this is due not so much to personal deficiencies as to debased standards. These debased standards are partly the fault of men of mind who

have encouraged the idea that the drama is permanently in a low estate. That critical disinterestedness advocated by Arnold has degenerated into uninterest. In consequence, intellectuals have abandoned a powerful and influential organ of our culture as unworthy of consideration.

It cannot be too strongly emphasized that the theatre, despite its limitation to New York, is presently right at the center of American culture and not just a local phenomenon. It feeds the movies and television and thus exercises both a direct and indirect influence on American thought and opinion. Furthermore, it is always interesting, even when it is bad, because of its striking contemporaneity. As Tocqueville noted, "No portion of literature is connected by closer or more numerous ties with the present condition of society than the drama." As an art, it has yet to prove itself in this country, but this is no reason for despair or pessimism about its future. It is the intellectual's function to encourage whatever excellence may appear, without adjusting his values, without sacrificing his aloofness, without shrillness or partisanship. His purpose should be not to demolish but to resurrect, for the theatre can still be a haven for those who love ideas.

a jaunt to the limits of the universe

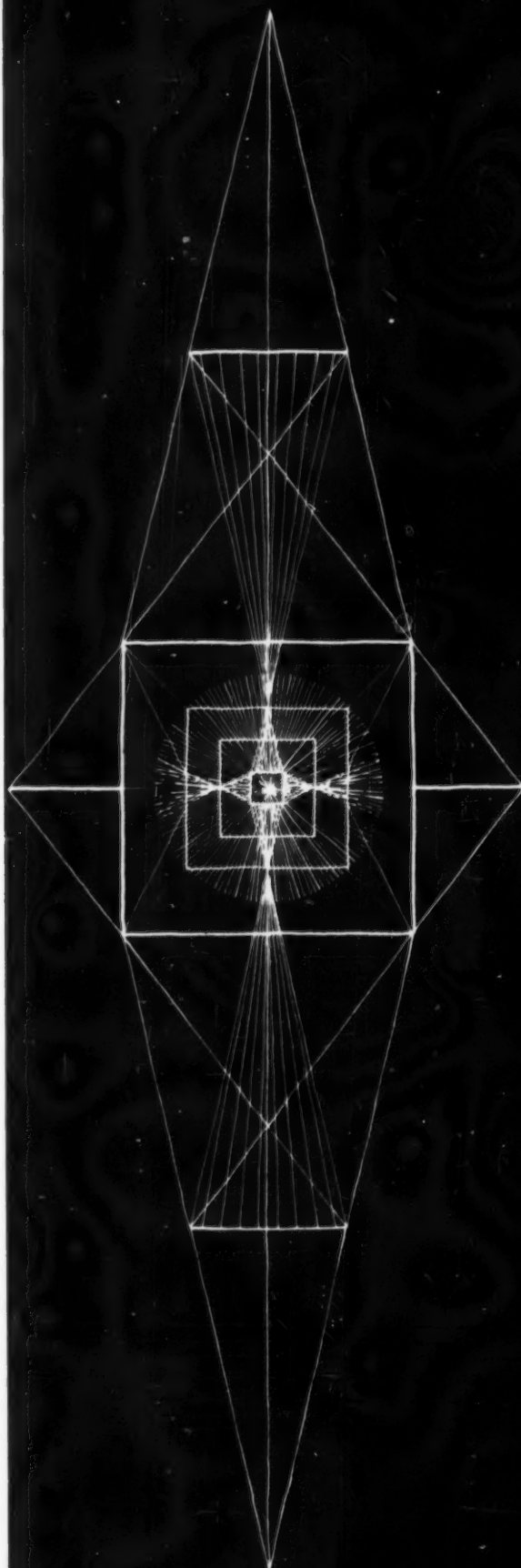
by LLOYD MOTZ

*What are the next steps into space?
Will relativity theory be proved there?
What might a space traveler see?*

The tempo of scientific and technological development has been so rapid in the last two decades that we may soon greet each announcement of a new discovery with as much or as little excitement as we feel reading daily stock market quotations or the latest unemployment figures. Only occasionally are we jolted out of our sophisticated complacency by a scientific event because it brings promise of drastic

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Original sketch by Richard
Lippold of his VARIATION NO. 7:
FULL MOON hanging in the Museum
of Modern Art. Courtesy of
the sculptor.



changes in our way of life. The advent of man-made satellites aroused another kind of excitement as well: the kind that Columbus and all other great explorers must have experienced as they set out to discover new lands. Very few of us living today will actually travel out into space, but most of us will certainly live to see others taking such trips—and returning.

Even now, though still earth-bound, we can anticipate what the space-traveler of the future will see as he flies at very great speeds through the solar system and to the stars beyond. But before we consider what is in store for the interstellar tourist, let us consider some of the technical problems that must be solved before space travel becomes a reality. And after that, a few of the theoretical problems to which space travel will offer solutions.

The next steps into space

We shall soon be sending unmanned rockets to the moon and back. But before any people leave on such trips, it will be necessary to construct a system of space platforms circling the earth at greater and greater distances above its surface. In fact, the initial phase of this important work has been done: since we have established the fact that a satellite can be put into an orbit, the construction of a space station becomes simply a matter of improving our satellite launching techniques.

We must now learn to project into the same orbit all the material that will be required to construct and maintain a space station. It will hardly be possible to do this in a single launching because of the enormous mass of material involved—the work must be done piecemeal. Picture, then, the space a few thousand miles above the earth's surface swarming with hundreds of containers, each filled with parts of lathes, electrical equipment, storage batteries, chemicals, food, etc. When all of these have been put into orbit, scientists, engineers, technicians, and laborers will be sent aloft to construct a station and to man it.

The actual construction of the station will be relatively easy because everything associated with it will be in what physicists and engineers call "free fall." In other words, everything will be weightless; there will be no structural strains such as we have to worry about in buildings here

on the earth. This means that the station can be constructed of the lightest kind of plastic pieces glued or welded together. The dome of the platform may be made of tough transparent plastic sheeting that can withstand pressures of a few atmospheres. The station can then be inflated to one atmosphere of pressure by pumping into it oxygen and nitrogen in the same proportion as that which obtains in our own atmosphere.

Since all of the people working with the space station will be orbiting right along with it, there will be no such thing as "falling off" as one might fall off the wing of an airplane. If a person were to step away from the space station in any direction, he would, because of his inertia, continue moving with constant speed in a straight line away from the platform; but he would also move in the same direction as the station moves while it circles the earth. Each member of the crew will therefore have to carry with him some kind of propulsion device, a small jet of some sort, to enable him to alter his direction of motion relative to the platform whenever he wants to.

Inside the station the absence of gravitational forces could produce complications; but such forces can be simulated if the entire platform is made to rotate fast enough about an axis.

A space platform of the sort I have just described will be of tremendous importance for astronomical research, since the absence of an atmosphere surrounding the station will enable men to view the sky continuously. The sky will appear pitch black, and the stars will be visible at all times, shining with a sharpness and untwinkling clarity quite unimaginable here on earth. Of course, night and day and our earth time-reckoning, with its twenty-four-hour period, will have no significance for the observers on a space station or for those on an interplanetary journey.

Artificial satellites and space stations will make possible experiments to verify some predictions of the theory of relativity, which, as we shall see later, will have an extraordinary effect upon tourists on interstellar trips.

Proofs of relativity theory

One of the most profound consequences of the theory of relativity is that space and time can no longer be considered as absolute concepts in the Newtonian sense, but rather as sections of a

space-time continuum which have different aspects for different observers moving in relation to one another. What this means is that our universe cannot be represented by a sequence of events having a unique separation in space and a unique order in time. Each observer in the wide universe, depending upon his state of motion, will find different distances between objects and different time intervals between events; concepts such as simultaneity and length lose their absolute meanings.

We may illustrate this by considering the results obtained by two observers moving past each other if they were to measure the distance between the same two points. Take as our two subjects a man in a moving train and another one standing on the railroad bank. Suppose that each of them measures the length of the car in which the man in the train is riding. The theory of relativity teaches us that the results of the two measurements will not be the same. The length of the car as measured by the man in the train will be greater than that obtained by the man on the railroad bank, and the difference between the two results will increase if the speed of the train increases. In other words, the observed dimension of a moving body parallel to the direction of its motion, as measured by a fixed observer, shrinks more and more as its speed increases, and approaches zero as the speed of the object approaches the speed of light.

Just as the length of a moving body changes with its speed, so too, according to relativity, does the rate of a moving clock. If the man on the side of the track were able to compare his watch quite accurately with a watch in the moving train, he would find that the moving watch was running slow compared to his watch. The faster the train moves, the slower will be the rate of the moving watch, finally approaching zero as the speed of the train approaches the speed of light.

A space platform will enable us to test this consequence of the theory of relativity: we now have clocks, such as the MASER clock (Microwave Amplification by Stimulated Emission of Radiation) developed by Professor Charles Townes of the Columbia University physics department, which are accurate to one part in a billion. If such a clock were placed in a satellite or on a space platform traveling at 18,000 miles

per hour, then, according to the theory of relativity, it should, after one day, lag behind a similar clock on the earth by about one twenty-thousandth of a second.

Professor Leon Lederman of Columbia is one of several scientists who have obtained direct evidence supporting this time dilatation (as scientists call it) in studying the lifetime of mesons. These ephemeral particles, with masses a few hundred times that of an electron, are born during energetic collisions of protons and neutrons with nuclei of atoms. In general, mesons have very short lives, living for no more than a few one-hundred-millionths of a second; but Professor Lederman has observed that the lifetimes of mesons increase, in accordance with relativity theory, as the speeds which they have at birth increase. In other words, if two mesons are created during two different collisions, the one that is moving faster through space is observed to live longer as a meson than the other one.

Once we get to the moon, the MASER clock will enable us to check a prediction of the general theory of relativity concerning the effect of a gravitational field on a clock. According to the theory, a clock in a strong gravitational field should lag behind one in a weaker gravitational field. Since the surface gravity on the moon is only one-sixth of that on the earth (a person on the moon will weigh only one-sixth of what he does on the earth), a clock on the moon should run ahead of an identical clock on the surface of the earth. This prediction can be tested by placing a MASER on the moon.

Now a rocket that lands on the moon should, of course, carry enough fuel to take off again and return to the earth. Since the speed needed to escape from the moon is less than one-fourth that required to escape from the earth (because the force of gravity is less), a rocket need only carry additional fuel amounting to less than one-sixteenth the quantity necessary to escape from the earth.

Professor Jan Schilt, director of Columbia's Rutherford Observatory, has suggested that a trip may be even more readily managed to and from one of the two moons of Mars. If we landed on Deimos, which is 14,000 miles from the center of Mars, we would require very little fuel to take off again for the earth, since we would have to

acquire a speed of only 4,000 miles per hour relative to Mars. Our space ship would already be moving at almost this speed, since Deimos moves at about 3,000 miles per hour relative to Mars. And the mass of Deimos is so tiny that it has practically no gravitational field of its own to be overcome.

Once interplanetary trips have become usual, the next step in space travel will be to the stars. Here problems of an entirely different order of magnitude will have to be solved, because of the vast distances to be crossed. The star nearest to us, Alpha Centauri, is so far away—about 26 trillion miles—that it takes light four and a half years to traverse the distance. This means that if interstellar navigators are to journey to the stars and back in times that are conveniently short within their own lifetimes, they must travel at speeds approaching the speed of light. If such speeds can be achieved by man, the relativistic time dilatation discussed above will have an extraordinary effect. To a crew in a space ship traveling at four-fifths the speed of light, a ten-year journey into space and back again, as measured by a clock here on the earth, will last only six years as measured by a clock on the ship; at nine-tenths the speed of light the duration of the trip will be only slightly more than four years.

It should not be supposed, by the way, that this difference in the duration of the trip as measured by an observer on the earth and by one on the space ship means that the travelers will detect any change in their metabolism or in any other biological or psychological processes. As far as our travelers are concerned, the four or six years they spend in transit will be the same as any other four or six years spent here on the earth; the aging process will go on as usual, and only on their return to earth will they be aware of the difference in times. They will return to an earth which is ten years older.

A trip through the universe

In principle, there is no reason why trips to remote galaxies may not be possible if man can achieve speeds close enough to the speed of light. But in practice it is doubtful that mankind will go very far beyond the nearest stars within the next few centuries.

Still, let us suppose for the remainder of this article that a space traveler could achieve the

speed of light—an impossible speed for a body of finite mass. Let us consider what such an imaginary traveler might see as he explored all corners of the universe. The times referred to in what follows will be those measured by a clock on earth, *not* a clock moving with the traveler.

Our imaginary traveler will reach the moon in less than two *earth-time* seconds. After he sweeps past this lifeless sphere, it will take him another eight and a half minutes to reach the sun. He will have to be very careful to avoid being vaporized by the intense radiation pouring out of its 5500° C. surface, but a few more minutes of travel will take him well beyond the danger zone. Lifeless Mercury, the planet closest to the sun, with one face in perpetual light and the other in eternal darkness, will rush quickly past, to be followed immediately by the mysterious Venus, with her veil of everlasting clouds completely obscuring the planet's surface from the earth. So similar to the earth is Venus in its geometrical features that scientists feel it is the likeliest site for another advanced form of life.

Our traveler will stop only a moment at Mars to convince himself that the green coloration in its equatorial region is indeed due to a low form of vegetation. He will then rush on to the largest and most massive of all the planets, Jupiter. With its atmosphere composed of noxious gases like ammonia and methane, and with its 15,000-mile-thick surface layer of ice, this forbidding king of the planets will present all kinds of hazards to explorers from earth. Ours moves on.

Five and a half hours after leaving the earth, the space ship will have traveled about 4 billion miles, passing the planet Pluto at the very outskirts of our solar system and heading toward Alpha Centauri, the star nearest to the earth. But so empty is space, and so vast the distances between the stars in the neighborhood of the sun, that four and a half years, as measured by a clock on the earth, will elapse before this star is reached. If the ship heads toward the very densest part of the Milky Way in the direction of the constellation Sagittarius, our traveler will find after some 15,000 years (earth-time) that the stars become much more numerous and also undergo a change in character.

By this time he will be leaving the outer spiral arm of our galaxy and entering the nucleus. He will have passed many millions of stars, most of

them redder and fainter than the sun, but many others tens—and even thousands—of times more luminous than the sun. Among these will be the very hot blue-white stars to be found only in the spiral arms of the Milky Way. These stars are probably no more than a few million years old, the infants of our galaxy, born just recently of the dust and gas expelled by the dying gasps of the very oldest stars, those which were formed about 7 billion years ago from the primordial hydrogen. Our tourist will meet only these very old stars during the 30,000 years it takes his ship to move through the dust-free nucleus by earth-time. At the very center of the nucleus, which is 30,000 light-years away from us, he will find the stars so crowded that were he living in that neighborhood, he would receive as much light from these stars at night as we might receive here on earth from three hundred full moons.

After the ship has passed through the nucleus, it will spend another 25,000 years rushing through the dusty spiral arms on the other side of the nucleus, and it will then proceed to the galaxies (the so-called spiral nebulae) that lie beyond. Our explorer will find that these galaxies, which are spaced millions of light-years apart, look in many respects like his own Milky Way. Most of them contain many billions of stars and have the same dusty spiral arms swirling around a densely populated nucleus. Like our own galaxy, they are thousands of light-years across, with the very old stars extending out from the nuclei to form the bulk of the stellar population, and with the younger second- and third-generation stars like our sun scattered along the spiral arms. He will observe that the galaxies do not live in isolation but belong to huge clusters, some of which contain thousands of members, all moving together through space. So numerous and closely spaced are the galaxies in many of these clusters that collisions between two such galaxies are quite frequent. These titanic collisions release vast amounts of energy which come to the earth in the form of cosmic rays and radio waves.

Our traveler will discover that it is not the individual galaxy that is the fundamental cosmological unit of matter but rather the cluster of galaxies. These clusters extend uniformly out into space as far as our telescopes can see, and, by the radiation that we receive from them, we

know that they are rushing away from us with speeds that increase as their distances from us increase. We must not suppose, however, that this means that our Milky Way occupies a central spot in the universe from which all things are receding; we would find the same thing to be true no matter which galaxy our solar system belonged to. For in fact all of these clusters of galaxies are receding from *one another* as if they were remnants of a huge explosion that occurred billions of years ago. It is this feature of the motion of the galaxy clusters that we refer to when we speak of the theory of the expanding universe.

According to this theory, about 7 billion years ago all the matter in the universe was in a highly compressed state concentrated in a sphere not many times larger than the sun. This unstable condensed universe gave way to an explosive state in which the expanding gases (principally hydrogen and neutrons) broke up into huge turbulences which became clusters of galaxies.

This conception of the expanding universe is a direct consequence of the general theory of relativity, but it is not the only possible conception. As Fred Hoyle, the British astrophysicist, has shown, it is possible to obtain a steady-state model of the universe from the theory of relativity by postulating that matter is being continuously created. As the galaxies rush away from us, and ultimately disappear, the Hoyle theory requires that one proton be born in each gallon of space every billion years to keep constant the total amount of matter in the observable part of our universe. These protons ultimately collect into huge clouds which then become new clusters of galaxies, only to rush away from each other and disappear.

The most recent data on the recession of the galaxies, gathered with the 200-inch telescope at Mount Palomar, seem to favor the evolving universe (the model expanding from an initial condensed state) as against the steady-state model of Hoyle. In fact, it appears that our universe is in the expanding phase of a pulsating motion, so that we may expect the expansion that is now going on to be replaced by a contraction, which will then be followed by another expansion, and so on ad infinitum.

This conclusion is supported by the recent observations made at Mount Palomar that the most distant observable galaxies (almost 2 billion light-years away from us) are receding faster than they ought to be if the universe were simply expanding at a constant rate. In other words, the expansion of the universe 2 billion years ago was proceeding faster than it is now, which means that a slowing down in the expansion has taken place since then. From this it follows that in about 15 billion years the expansion will come to a halt altogether and the universe will begin to collapse and finally reach a highly condensed state again. Then another expansion will begin, in which all the changes in the universe which are now taking place will

recur in precisely the same order.

Such a pulsating universe follows from the general theory of relativity and has important consequences for our imaginary traveler, whom we left wandering among the galaxies. A pulsating universe is necessarily one in which space is curved and completely closed back upon itself—finite but boundless, so that our space tourist will ultimately find himself back again at the point from which he started if he continues traveling in what he takes to be a straight line. Since billions of years as measured on the earth will have elapsed by that time, he will certainly not find the earth as he left it. But he will have had a fairly memorable—though still, alas, impractical—trip in the interim.

In the beginning...

The late Paul Bellamy once told me that in his early days as city editor of the *Cleveland Plain Dealer*, he was making the rounds of the reporters' desk one night and noticed that one of his men was grinding out a "tape worm" on what Bellamy regarded as a relatively unimportant event. "Cut it down!" he said, "After all, the story of the Creation was told in Genesis in 282 words."

"Yes," the reporter shot back, "and I've always thought we could have been saved a lot of arguments later if someone had just written another couple hundred."

From a talk by Frank Starzel, general manager of the Associated Press, at a recent luncheon of the Graduate School of Journalism.

The Surprising Effect of McCarthyism On "THE ACADEMIC MIND" ????????????????

by SEYMOUR MARTIN LIPSET

*A teacher with strong—and partisan—views on professors and politics discusses
the surprising findings of a new book on the McCarthyite years.*

Early in 1954 Robert Hutchins, former chancellor of the University of Chicago and now president of the Fund for the Republic, stated that "the spirit of the academic profession was being crushed" by McCarthyism. Hutchins' was one statement in a controversy concerning the degree to which academic and other freedoms were at that time being curtailed as a result of the methods used in anti-Communist investigations. To help settle the controversy, the Fund for the Republic commissioned Paul Lazarsfeld of the Columbia University sociology department to find out whether or not Hutchins was right. The fact that the Fund does not limit the freedom of scholars whom it employs is demonstrated in the book which has come out of the research, *The Academic Mind*, by Lazarsfeld and Wagner Thielens (Glencoe, Illinois: The Free Press, 1958), which proves that Hutchins, the Fund's president, was wrong.

The Academic Mind is an analysis of the behavior of the social science segment of the academic profession during the time when McCarthyism seemed triumphant. It is based on systematic interviews with 2,451 members of college social science departments. It is one of those major investigations of social behavior which, like Samuel Stouffer's *American Soldier* series, Kinsey's reports on sexual behavior, and

T. W. Adorno's investigations of *The Authoritarian Personality*, are so rich in data, insight, and interpretation as to stimulate a rich literature of analysis and criticism. So it is difficult to deal with the problem under investigation—academic freedom—and the findings of this book in a short essay. All that I can hope to do here is to whet the appetite of the FORUM's audience to read the book for themselves.

In order to analyze the reactions of American social scientists to an attack on them, it is necessary to know who they are, according to their common characteristics and attitudes. These attributes, established long before McCarthy or the Cold War, determined how the profession met the situation.

To begin with, it is necessary to understand that academicians belong to what sociologists call a "high-status" occupation—and that they are quite liberal politically. Two thirds of those academicians who voted in the 1952 presidential election (and 80 per cent of those voters in universities which have the highest prestige) supported Stevenson. This finding bears out earlier studies, which also suggested that college faculties as a whole, and social science divisions in particular, have been strongholds of liberalism and of support for the Democratic Party.

The liberalism of the academician, with his demonstrably high status in the community, confounds the conventional association of high status, conservatism, and Republicanism. But the authors point out that this liberalism is linked to the fact that professors do not see themselves as a group with great prestige. When these academic men and women were asked how typical

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businessmen, Congressmen, or college trustees would rank professors in contrast to "the manager of a branch bank, an account executive in an advertising agency, and a lawyer," the majority of those answering thought that businessmen and Congressmen would put them in last place. They were the most optimistic about where they stood with college trustees, but almost half of those with opinions said that the "average" trustee would rank them either third or fourth. Lazarsfeld and Thielens point out that "professors, at least social scientists, seem to consider themselves an occupational minority toward which significant sectors of the community hold relatively contemptuous attitudes." This self-image encourages them to pursue the same political path as other deprived groups: support of the comparatively left-wing party.

The consensus within the social science wing of the academic profession that their status is lower than that of respected business and professional groups is particularly interesting in view of the fact that a number of studies have shown that professors are ranked as high or higher than these three elite occupations by samples of the American population, and that businessmen or independent professionals who enjoy high status themselves rank college teachers even higher than does the general population. We need not pursue here the sources of the discrepancy between the *actual high* status of professors in the community and their presumed feeling of lower status; but it is clear from the data in this book that feelings of low status are closely correlated with liberal politics.

These data concerning the political attitudes of academicians go far in explaining their attitudes concerning threats to academic freedom. Not surprisingly, almost two thirds of those interviewed early in 1955 believed that "there is a greater threat to intellectual activity in America than there was a generation ago." And those who were most apprehensive about such threats were to be found largely among liberals and Democrats. (Parenthetically, I might point out that a study made in 1954 of attitudes toward McCarthyism in a Vermont community found, much to the surprise of the investigator, that a majority of the population reported that they felt *more free* to speak their minds than they had five years before. When the sample was divided between Republican and Democratic respond-

ents, it turned out that in this predominantly Republican state, Republicans meant that they felt more free in 1954 under Eisenhower than they had in 1949 under Truman.)

It seems clear from this book that a large minority, almost half of the respondents, believed that they were under serious attack. And this belief, held largely by liberals, seemed to stem in some part from concrete unpleasant experiences: the apprehensive professors reported having had personally inhibiting experiences (as, for instance, having been reported to higher administrative authorities for something which they had said) in greater numbers than did non-apprehensive ones. It may come as something of a surprise, then, to discover that the most apprehensive scholars were not frightened into silence or inaction.

For in fact the more apprehensive a man was, the more likely he was to vigorously protest a ban by the president of his university of a controversial speaker such as Owen Lattimore or a ban on a student debate on admitting Red China to the UN; he was more likely to read *The Nation* or *The New Republic*, to belong to "at least one political organization considered likely to be attacked"; and was much more likely to state that he had *recently* publicly expressed a political view even though he felt that he might be criticized for what he said.

A similar pattern is revealed by the findings that highly apprehensive men tended also to be highly "permissive" of radical and Communist political behavior. For example, they were likely to favor a Young Communist League's being allowed on campus, to oppose the firing of a Communist teacher, and to think it an advantage to have a radical teacher on campus (actually, 63 per cent of all social scientists interviewed agreed on this point).

As Lazarsfeld and Thielens remark about these findings: "There is indeed widespread apprehension among these social science teachers, but in general it is hardly of a paralyzing nature; the heads of these men and women are 'bloody but unbowed'."

Thus far the evidence clearly suggests that most of the social science profession maintained political integrity in spite of the actual and psychic pressures which many professors, partic-

ularly the liberal majority, reported having experienced. Further, this integrity was sustained best by the more distinguished scholars, a fact which is demonstrated in *The Academic Mind* by a specification of the characteristics of those institutions and those men most under pressure. When colleges were differentiated according to academic quality, the more distinguished the institution, the more incidents involving threats to academic freedom which were reported by its faculty members, and the higher the degree of personal apprehension among them about the consequences of attacks on scholars.

But these same leading faculties also exhibited greater permissiveness toward radical and Communist activities on or off the campus, were more likely to have in their ranks men who courageously expressed controversial views, publicly or in the classroom, and were more likely to report that their administrations strongly articulated the values of academic freedom as college policy. Furthermore, these distinguished universities and colleges gave their faculty members more opportunity to act in matters of academic freedom, and were more likely to protect members of the faculty when these were criticized by students, alumni, or outsiders. Similarly, within institutions of comparable academic quality, it was the more productive scholars who reported both greater personal exposure to threats and psychic insecurity, and continued involvement in actions which might subject them to attack.

These results suggest several paradoxes. The noted social scientists who make up the faculties at distinguished institutions seem to have had less academic freedom as judged by the number of adverse incidents they reported than did those who are less eminent and are at mediocre, often small, traditionalist, religious, and conservative colleges; but at the same time the more distinguished group had more militant attitudes with regard to academic freedom, and indicated that their institutions gave them more rights and protections.

The explanations for these paradoxes are simple and say a great deal about the sources of threats to academic freedom. While the academic profession as a whole is considerably to the left of middle- and upper-class opinion in America, the more distinguished social science professors and faculties are even more overwhelmingly liberal and Democratic. This explains both their

heightened sensitivity to dangers to academic freedom and the fact that many more attacks have been leveled against them than against less liberal and also less "visible"—since less distinguished—teachers.

The attacks against social scientists are directly linked to the fact that social science, in this country at least, is a major opponent of conservatism. Opponents of groups and institutions which are allied to political conservatism—business associations, the Republican party, veterans' and patriotic groups, and traditional religions—receive important support from the activities of social scientists in the classroom, in books and lectures, and as citizens. The businessman of a college community usually knows that the local consumers' cooperative exists because of the professors. Urban co-ops, in fact, scarcely exist outside of academic communities, and their prosperity there bears witness to the felt hostility of much of the academic community to private business. The strongest centers of Americans for Democratic Action have been university communities. The advocates of legislation to abolish discrimination in private employment, housing, or elsewhere can always rely on social scientists to provide briefs for their side. And the better the academic institution, the greater is this hostility to conservatism.

Some conservatives cannot and do not want to understand the rationale for academic freedom, particularly when this rationale serves to protect political opponents. But it is worth noting that conservative administrations and businessmen trustees have generally protected teachers and that violations of academic freedom have been relatively minor considering the sharp difference between the views of professors and their financial sponsors. Perhaps in no country has the contradiction between the opinions of distinguished faculties and conservative trustees remained as great as in the United States.

The split between academic and conservative politics has, of course, been apparent for many decades without provoking serious attacks on academic freedom or great anxiety among teachers. Things changed after World War II with the intensification of the Cold War and the growing strength of conservatism, Republicanism, and the rise in prestige of the businessman. In addi-

tion to the growing strength of this opposition, it became clear that a significant minority of intellectual liberals had cooperated to a greater or lesser extent with Communist, fellow-traveling, or pro-Soviet groups during the thirties and early forties. This made them logical targets for right-wing attack in an era in which the Soviet Union was identified as an aggressor and enemy and in which more and more people came to recognize that there is little meaningful difference between Fascism and Communism. Attacks on liberal intellectuals from right-wing extremists, attacks which had found little public support between 1933 and 1946, became more and more popular as the Cold War intensified and conservatism gained ascendancy. The campus radicals, particularly those who had some previous involvement with the Communist party or its fronts, often faced the real possibility of outside attacks. And, as we've seen, Lazarsfeld and Thielens indicate that the better schools which are centers of academic liberalism also had a disproportionately large number of verified incidents involving threats to academic freedom.

Given these facts, we are entitled to wonder at the seeming courage of the allegedly timid professors. Why did not the real and psychic pressures reduce their involvement in liberal activities or their willingness to protest administrative violations of campus free speech, or their outspokenness in voicing unpopular opinions? One possible interpretation of this behavior is that there was, in fact, very little real pressure, that the concern with violations of academic freedom was largely ideological exaggeration by liberals and leftists who like to believe they are being persecuted. While, as we have seen, this ideological element undoubtedly did have its effect, there is at least one other explanation for the "courage" of the social scientists: it lies in the nature of their social environment.

The academic occupation, like some others, may be described as an "isolated" occupation, insofar as its members tend to associate primarily with other academicians and have relatively little to do with persons employed in other industries. As an isolated occupation it resembles—odd as this may seem—manual jobs such as mining, seafaring, and lumbering, in which the conditions of employment force workers to live in com-

munities inhabited mainly by men in the same line of work. These isolated manual occupations seem to encourage a strong disregard for what society as a whole considers proper. For example, they exhibit very high strike rates, even during periods of national emergency, and show strong support for extreme left-wing political parties. During World War II, miners in the United States, Britain, and Australia all were involved in large strikes, even though public opinion, as expressed by the mass media, political leaders, and so forth, condemned these strikes as treason. These condemnations had little effect on miners who lived in mining towns, for the only effective public opinion in these towns was that of the other miners. A miner who refused to strike would face general opprobrium, but few would call him a traitor for striking.

Curiously, the professor is in a somewhat comparable situation. He also resides within an "occupational community" composed of other teachers, and as *The Academic Mind* makes clear, the better the college, the more likely are its social scientists to have their closest social ties within the faculty. Over 70 per cent of those in the best institutions reported that they associated mainly with other faculty members. Thus the centers of liberalism, where there is greatest concern about academic freedom, and the greatest real danger of attack, are precisely schools whose faculty members do the most "mixing" within their own occupational group. And the data in this study indicate that the higher the degree of apprehension about academic freedom, the more often a professor is likely to discuss civil liberties issues.

The courage and liberalism of a professor in such an environment is constantly reinforced by social contact. Lazarsfeld and Thielens say: "While outside forces such as legislative committees may have harsh and definite means to do him damage, he cannot underestimate the subtle deprivations to which his immediate professional environment could subject him." Men live in small communities, not simply in the great society, and the small community both reinforces its own attitudes and punishes deviations from group norms. Thus the liberal consensus within the social sciences in distinguished schools actually serves to intimidate conservatives and those professors who agree with the outside critics of

academic liberalism much more than outside prying and criticism inhibit those left-of-center. A partial explanation, then, of the courage of the professor lies in the fact that what would be courageous individuality in a television studio, a newspaper editorial page, or the halls of government is conformism within the groves of academe.

The findings of Lazarsfeld and Thielens clarify a political dilemma which has existed for a long time but has rarely been faced by the academic profession: that profession's desire to actively influence politics from a partisan liberal slant, and its wish to remain free from criticism by its political opponents. Clearly, access to the minds and voices of the social science faculties is a major political asset, one which Republicans and conservatives lack, to their conscious sorrow. (The Republican need for "eggheads" can be seen in the fact that the only two professors who have written recent positive works on the Republican Party, Arthur Larson and Malcolm Moos, have since been employed as presidential aides in the White House.) If American intellectuals as a group, and social scientists in particular, often back left-of-center politics, then the conservatives must attack them and seek to reduce their considerable influence. And the intellectual must defend his politics and his right to advocate them openly. Academic freedom is one consideration, but plain, old-fashioned party politics is another, just as real, just as necessary.

If I may end on a personal note—as a professor who has always voted Democratic or Socialist (except when supporting Jacob Javits); as one

who has belonged to a variety of controversial organizations, some far out on the non-Communist left; who prefers consumers' co-ops to chain stores; and who in general possesses that variety of attributes which Lazarsfeld and Thielens show as characteristic of a social science professor—I do not see anything grossly unfair in my conservative opponents' seeking to reduce my political effectiveness by ridiculing my occupation. I am perfectly ready to reply in kind about the functional incapacity of professional soldiers to learn the art of politics, the stupidities bred by the country-club golf courses, and so forth. Conservatives want to stop liberal professors from using the prestige of their occupation to further social reform. We would like to stop them from using their economic resources in the form of campaign gifts, control over newspaper policies, and so forth, to prevent reform. We should make clear to them that they have no right to interfere with our employment, with the internal intellectual life of the university, but they have every right to attack us politically—for we are not inclined to be political eunuchs. Lazarsfeld and Thielens have shown that social scientists are political liberals and Democrats. The Republicans had better begin looking for good interpretations of why most of the best-trained men in the country in economics, politics, history, and social relations so consistently oppose them. I suspect they will continue to find some explanations which we will not like. That is their business. The task of the liberal professors is not to become frightened by such attacks. And fortunately, *The Academic Mind* indicates that they do not.

MAGIC, music & MONEY

by JACK BEESON

As the saying goes: Somebody said that it couldn't be done—and it can't. But a young composer tells how music is made anyway.

Every year more and more magicians disappear. Not so long ago the navigator was magician to the shore-bound, apparently relying on some occult connection with the spirits of the sea and sky, though actually drawing on his knowledge of simple arithmetic, tables, and the known movements of the spheres. Today, with radar, and with the Hydrographic Office's having already worked out most of the problems and tabulated the answers in nine volumes, the magic is almost gone. Navigation can be learned in evening classes, and everybody with even a middle-size boat goes to class. Similarly, the practice of medicine—especially diagnosis—was once very much a matter of sorcery to the layman. But now that *The New York Times* is only a day behind the learned journals in reporting the latest medical advance, and now that we can all participate in the conquest of disease by contributing a dollar to the Muscular Dystrophy or Heart Fund, medicine—even diagnosis—is losing its mystery.

To anyone who still wants to be thought a magician by everybody else, I recommend musi-

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cal composition. The general public simply refuses to believe that composers create music by any other than occult means. It is of no use to assure an inquisitive music-lover that a composer prefers to compose regularly every day (most write music in the morning, between breakfast and lunch), that he doesn't despise bourgeois comforts, that he doesn't understand what the word inspiration means (at least as the layman uses it), that he makes music the way anybody else makes anything else: by making it.

The facts are against him. When he leaves his study for lunch (he has probably been composing in the living room or in the bedroom), there is some music newly created, seemingly out of nothing, and it can affect a listener in some curious—magical—fashion which defies precise verbalization. It is thought suspicious that his study is invariably neat, with sharp pencils, razor blades, rulers, erasers, and much unused paper. And if composers look like everybody else and mostly talk not composition, but money, rights, commissions, and jobs among themselves, what Inquisition was ever fooled by the looks of a necromancer or by the fact that alchemists among themselves spoke innocently of the fluctuating prices of base metals?

The only magic in music for the composer is the strange power it has to compel him to compose, against all the dictates of reason and cautions of common sense. For, although writing music in the United States may be a way of life for a composer seriously interested in the expressive powers of music, the composer does not very often make a living from composition alone.

This is not to say that money cannot be made in writing music. A person may have only modest musical gifts, little or no training (he may read music only haltingly and not be able to write any of it down), but with luck, perseverance, and the collaboration of a good lyricist, he may make money—sometimes lots of money—

writing popular music. But as the tunesmith of a juke box hit he resembles more closely one member of a team designing a commodity than he does a composer. For the process by which his tune is selected, treated by a highly specialized arranger, recorded by a favorite band and a sexy vocalist, plugged over the air or in juke boxes, and listened to and forgotten by millions of persons—all this has more to do with toothpaste and detergents than it has to do with musical composition, which is communication in tone between two human beings.

The American layman tends to define these musical extremes by the terms *popular* music—music which is very much liked by practically everybody for a short time—and *classical* music—music of the sort that goes on in concert halls and is heard over FM and other commercially unsuccessful radio stations much of the time, and over networks and big-time stations at strange hours. (It is easy to avoid classical music on television because there isn't much.) The third category is *semi-classical* music and consists of popular music which has survived its period of popularity and that classical music which has become almost universally familiar.

As everybody knows, a lot of what sounds like popular music never fulfills its definition and becomes popular. And, as not so many know, classical music is really much more popular than is supposed. As for semi-classical music (that is, semi-popular music), over a period of years it pays better (that is, it is more popular) than popular music. Real jazz is actually much more nearly related, in the attitudes of its creators, performers, and listeners, to classical than to popular music, though its adherents are much less numerous. They are today the smallest minority group among musicians and affect the longest hair.

Statistics reinforce the fact that there is money in music. One speaks, in this country, of the music industry. Last year almost half a



billion dollars were spent on record players alone. Of the \$360 millions spent on records, at least one quarter went for recordings of classical music. And as has most often been the case recently, more money was spent last year on classical music than on spectator sports.

However impressive the bare facts on the widespread use of "classical" music in this country, it is clear that there is a certain rough injustice in democracy as it affects the arts. The kinds of music favored by minorities numbering even in the millions are economically at a disadvantage when pitted against the kinds of music favored by the majority. There is enough money in popular music to make its composers interesting to capitalists, labor groups, lawyers, and legislators. The spokesmen for the national conscience may occasionally pay lip service to the "classical" composer, but he is not financially interesting enough to have friends in court or Congress and therefore receives as small a piece of the economic pie as decency permits.

And so it is that the composer of what the masses call classical music rarely lives exclusively from the money he receives from composing.

There are only a few composers who manage (sometimes with two different names) to support their composition of "classical" music by writing "popular" music; for the person is rare who can and does compose serious music and who has also the knack and stomach for the most popular variety. He must move in two quite different social and musical worlds and he must, to say the least, have a flexible esthetic and a thick skin. There are, however, numerous composers whose main energies go into concert—or uneconomical—music, but who have no conscientious scruples against writing once in a while (or as often as they can) a score for a movie, a television show, or a Broadway musical comedy or play.

The theatrical forms have always offered the most money for music. In fact, since the mass media will sometimes permit, on especially prestigious occasions, the breadth and depth of expression associated with concert music, a number of highly trained composers with serious musical intentions live out their entire creative

lives on the more sophisticated levels of the theater, movies, and television. Many of our most respected composers of chamber music, songs, orchestral music, and operas, however, will have nothing to do with those media which must be coerced or shamed into using the good offices of serious composers. They are likely to be scornful of those who write consistently or even occasionally for Hollywood or Broadway. This scorn takes the form of upbraiding the erring composer for having made concessions to the public, though a disinterested person might point out that there is no one public, only different publics.

Those who elect to see a film made by the kind of producer who would choose a score by a high-class composer are not those who flock to a film made especially for adolescents, one of the chief attractions of which will be music designed for adolescents. Furthermore, many of the "concessions" are simply musical practices made necessary by the dramatic media and are no more improper or immoral than the suiting of a composer's symphonic thoughts to the performers and instruments of a symphony orchestra and the customs of the concert hall.

But, not to pursue further matters of musical morals, how *does* the composer make money from creating "classical" music, serious music, concert music, art music, or call-it-what-you-will music? Leaving out of account such windfalls as Hollywood film scores, which are offered only occasionally to composers not regularly employed in a movie studio, let us trace the economic life of a symphony.

It is more than likely that a composer spends between six and twelve months at work composing and scoring a thirty-minute symphonic work. He writes his symphony in the first place because he wants to, or because he feels he should, or because, if he is experienced and well known—and let us assume he is—because some orchestra or foundation has commissioned him to do so for some such sum as a thousand dollars. He may or may not be required to furnish the orchestral parts. If so, he may copy them out himself, or, to save his own time, he may have them done by a professional copyist, who will charge close to a thousand dollars. He can have the parts copied abroad for a quarter or half that sum, but he may run into trouble later with American union musi-

cians. Orchestral parts are almost never engraved nowadays. As a rule, full scores are first circulated among conductors in blueprinted copies of the composer's manuscript. In such circumstances it is not surprising that there is hardly a professional composer alive who does not write music legibly. No one can afford the shorthand scrawl common in earlier days when copyists were plentiful and ill-paid. If, however, the contemporary composer does not write legibly enough, or if he is hard pressed for time, wealthy, or supported in this by a publisher, he will have the score—as well as the parts—copied out by a professional copyist at rates which *begin* at several dollars per page.

When the work is finally performed, the composer will charge a royalty and rental for the use of the score and parts. He is likely to bargain sturdily for the first-performance fee. Nevertheless, he is unlikely to be paid much more than the usual amount paid by a major orchestra for a thirty-minute symphony: about \$100. For subsequent performances by the same orchestra he receives, usually, \$50. If there are later performances by orchestras not in the top ten (second performances are much rarer than premieres, by the way), the composer will receive half the sums paid by major orchestras. If the symphony is accepted by a publisher, who acts as the publicity and rental agent, the composer splits all fees 50-50, whether the publisher actually publishes or not. In the unlikely event that the publisher does print the work, the composer receives 10 per cent of the list price of the score. If he is extremely fortunate, he may have his symphony recorded. In such a case the royalties will not be great—both he and the publisher receive 4 cents on each record sold; but a recording makes possible radio performances, and each performance will be logged and paid for by one of the performing rights societies—probably ASCAP (American Society of Composers, Authors, and Publishers) or BMI (Broadcast Music, Incorporated)—provided that the composer is a member of one. In case he is not, or is not a member of the group to which his publisher belongs, only the publisher receives payment. The money a composer makes through his performing rights society is substantial, but the complicated and unpublicized payment practices of the societies are not easily broken down

to determine how much money a symphony is worth per radio or television performance.

Even if the symphony has been commissioned in the first place, wins the Pulitzer Prize of \$500 after the first performance, and is then widely performed, recorded, and played often over the air, the composer is not likely to earn enough money to keep himself and his family for the length of time he invested in the composition of the piece. And of course all these blessings are never visited upon one symphony. The result is that writing symphonies is a losing proposition, economically speaking.

Because opera performances take place in theaters, where larger amounts of money change hands—royalties are larger and extended runs are possible—there is a greater chance that the opera composer will be reimbursed for his time and out-of-pocket expenses. He may even make money. But the majority of composers of successful two-hour-long operas will only lose four times the amount they would have lost on a thirty-minute symphony. It is not surprising that literary men who are accustomed to live by their writing cannot often, if ever, afford the time to write a libretto.

Composing chamber music is, from the economic point of view, hopeless. It is infrequently performed in public, is not often subject to performance royalty or rental of parts, and in the rare instances in which it is recorded, the records are not bought by the public or played over the air. For some reason the record-buying and radio-listening public prefers huge orchestral sounds and operatic cataclysms in their living rooms over chamber music, which is almost always faithfully reproduced electronically and perfectly suited to the size of living rooms.

Concert songs and music for one or two instruments, two other kinds of respectable music-making, are in an even worse fiscal state. They are performed sometimes, but though fifty performances of a piano sonata by a virtuoso on tour may add greatly to a composer's reputation, he is not likely to receive more than 10 per cent royalty from the one copy of the music bought by the pianist: 30 cents. (If the work is not published, it is quite likely that the virtuoso was *given* a copy of the manuscript, reproduced by a blueprint process at a cost to the composer of \$5.) If the pianist happens to appear in an ASCAP-licensed hall, a pittance performance

royalty will be paid to the composer, provided he is a member of ASCAP.

In this country the principle is not yet established that the composer should receive a royalty for each performance of his music before a paying audience. The performing rights societies have been making only slow progress in convincing American concert managers and the ladies on civic music associations that if the janitor, the piano tuner, and the ticket salesmen are paid, the composer should really be cut in too.

Breathes there a man with so little economic determinism in his soul that he does not wonder if perhaps even the more enlightened elements of society no longer require some kinds of traditional music-making? The once clear, though often strained, relationship between the composer and his princely or ecclesiastical patron has changed in the last 150 years to a very complex relationship between the composer and the distant, unknown listener, who becomes a patron whenever he buys a record of the composer's music or buys the products advertised on the radio programs which present his music "live" or recorded. The old-fashioned means of communication by way of live concerts and publication still exist (both involving "patronage" by way of royalties and tickets), but it is significant that publication is every year of less importance. Music publishers live these days from their percentage of recording, radio, and television payments, not from sales.

The once clear and close relationship between the man who needed music for a specific purpose and the composer who wrote it for him has become very muddled, not only by the legacy of the nineteenth-century notion that the true artist creates solely out of his need for self-expression rather than to fulfill someone else's need for his music, but also by the hosts of persons who make the composer's music available to listeners by way of the modern means of musical communication. These middlemen too often interpose their own tastes and business interests between composer and listener. In this situation, aggravated by the fact that the American audience for music is growing and learning and changing in mysterious ways, it would not be surprising if composers frequently spent their energies in directions that are as empty of listeners as of

financial reward. And at the same time, composers may overlook kinds of musical communication that arise out of new musical needs in a rapidly changing society.

This is not to suggest that composers should write down to a public. As recently as ten years ago new music was still resisted by the large musical public because it did not sound like the fifty works which made up the universal orchestral repertory. The language of musical modernism irritated a public not yet accustomed, as it is now, to some of these same sounds on movie sound tracks. And in these ten years vast amounts of old and new music formerly seldom heard have been recorded and have become available to anyone with an FM radio and a middle-class pocketbook. In the face of this new public sophistication, the fifty works are gradually being retired, resistance to contemporary music is diminishing, and the composer should re-examine his relation to an audience that is changing faster than he is.

Perhaps the day will come when a very large segment of our population will have been educated in their college Introduction to Music course and by their records and radios and local performance groups to a healthy receptivity to modern music. Perhaps by that time the present copyright law, which does disservice to composers, will have been changed. And perhaps the composer will be in a powerful enough position financially to overcome the present sharp practices of all those groups which today make more money than they should from his efforts.

But while he awaits the millenium, the composer must eat. Since he cannot, or will not, or at any rate usually does not live by composing music, he must do something else. Usually it is something musical. He may conduct, or play an instrument, or both. He may work in some corporation concerned with the business of music. He may pay his way by writing criticism, thereby influencing friends and making enemies among his composer colleagues and thereby garnering good or at least polite reviews for his own music from his critic colleagues. He may live for some years on a series of prizes, fellowships, and foundation grants.

Or he may teach. By far the largest number of old and young composers, well-known and

unknown, are today teaching in colleges, universities, and conservatories. There is much argument among composers as to whether this is a good idea. The teaching composer is not in the position of the scientist whose research project occupies most of his time. When teaching duties are consuming, the teaching composer becomes a "summer composer," developing a bad conscience and a rusty technique during the winter. But many composers can and do combine prolific writing with teaching. Against the composing-college teaching combination it is sometimes charged that the composer becomes a verbalizer who comes to believe the oversimplified half-truths he passes out to the nonspecializing student, and that he is not called upon to operate at full capacity as a professional musician when working with music majors only half committed to music as a profession.

It depends. With so many composers of such different persuasions now at work on college and university faculties and with the levels of music-making and performance in some institutions approaching the levels of conservatory music, it is dangerous to generalize. One may, in fact, object that the conservatory point of view, with its interest focused on the creative and recreative musician, may also be dangerous for the composer who will spend his life writing music for

an audience made up for the most part of non-musicians.

Surely it should be the business of a composer to compose, and surely the most healthy situation for everyone concerned is one in which the composer can live by his creation. Whether the American composer will be able to do so in the future depends on the extent to which he can communicate musically and economically with a large public. His position will be assured if the American educational ideal should ever be fulfilled: the elevation of all intelligent persons to the condition of what was once an intellectual elite. But the composer will be even worse off if the mass media succeed finally in reaching everybody and then, for financial reasons, succeed in coarsening the response of the individual to the extent that he cannot understand because he does not any longer want to understand or react to a personal musical statement addressed to an individual listener.

The composer of today, whenever he teaches Introduction to Music courses on campuses or on television or radio, is doing more than making money to buy time in which he can compose. He is participating in a social and educational experiment which, if successful, will bring new and larger audiences to his music and to all music in the future.

The Evasive Annals of Academic Freedom

For several centuries after the emergence of the Italian universities in the late Middle Ages, students held all [university] administrative posts, and the student legislative bodies established regulations governing the fees to be paid professors, the length of their lectures, and the fines to be levied against teachers who came to their lecture halls late . . . and who taught less well than the students thought desirable. Eventually, for a complex of reasons, student control waned . . .

From an address by W. H. Cowley before the Western College Association, as quoted in The Academic Marketplace, by Theodore Caplow and Reece J. McGee (Basic Books, Inc., New York, 1958).

INSTANT DIPLOMACY & THE NEW DIPLOMATS

*The Times' veteran on the diplomatic beat
views push-button politics & public men.*

by DANA ADAMS SCHMIDT

"I dread the coming of the jet plane for ordinary travel," Secretary of State Dulles said the other day. "It gets you there so fast you don't have time to rest on the way."

This was Dullesian whimsy, but there was a nice bit of candor in it. For air travel is Mr. Dulles' special form of escapism; it is to him what golf is to the President. He loves airplanes because while airborne he cannot answer the telephone or keep appointments in the ordinary way. And if the use of jets is going to reduce his time aloft, he stands to lose some of those precious hours of isolation, hours for thinking, hours even for rest.

But there was also a sly bit of prevarication in the remark, because Mr. Dulles loves airplanes not only as a means of escape but because they are one of the modern means of communication that he firmly believes heighten the effectiveness of his diplomacy. If jets should double the speed

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of air travel, he would probably solve his dilemma by flying twice as much.

Our hearty Secretary of State put the case for diplomacy by airplane and, indeed, by all the devices of modern communication, including the overseas telephone, television, and walkie-talkies, in an interview last year with Martin Agronsky on the NBC television program, "Look Here." Asked why he did so much flying, he replied:

Well, I fly because I go to meet heads of government, foreign ministers of other countries, and in a few minutes or at most a few hours of personal consultation you can achieve a much better understanding than you can possibly achieve by going through the processes of communicating through notes and writing to each other.

It is just like you and me talking here, today. We understand each other, I am sure, a lot better than if you were writing me a letter and I was to write you a letter back.

Now, it is the same thing that happens on a broader scale in the field of international relations. But that doesn't mean that your ambassadors have lost their usefulness. An ambassador is just as useful as he ever was, but the whole scheme of things has been speeded up, you have closer communication, and it would be entirely behind the times if you didn't take advantage of this opportunity to talk to people personally. I don't find it a particularly exhausting process, either.

Indeed, Mr. Dulles is a hard man to exhaust.

There can be no argument about the quantitative effect on diplomacy of our new devices for swift communication. Are we then to believe that modern diplomacy is merely doing the same things it has always done—but faster? Or have modern communications wrought also a qualitative change?

In ancient times it was customary for princes of one country to communicate through messengers with those of another on the rare occasions when communication seemed desirable. The messages might be oral or written. But for their fleetness and sureness of foot, the messengers were of no use. Not until the twelfth and thirteenth centuries does it seem to have occurred to rulers that the messengers themselves might contribute something by means of their own observations, intelligence, and judgment. The thirteenth-century Venetian Republic laid down rules for the ambassadors it occasionally sent abroad, requiring them to write reports within fifteen days of their return—and to surrender any gifts they had received abroad.

Diplomats from the other side were regarded as dangerous characters by the Venetian government, and in 1481 it prescribed fines or banishment for anyone who discussed affairs of state with a foreign envoy. King Henry VII of England forbade his subjects to have anything to do with diplomats, and the Sultan of the Ottoman Empire from time to time locked them up.

Yet they were thought so useful to their own countries that in 1496 the Venetian Republic took the first step towards creating a permanent diplomatic service. Because "the way to the British Isles is very long and very dangerous," it named two merchants of London as its own *subambasciadores* and soon thereafter dispatched Andrea Trevisano to be its first permanent ambassador to the court of Henry VII. In ensuing centuries, according to one authority, diplomacy became a "process of exalted haggling, conducted with amazing disregard for the ordinary standards of morality, but with the most exquisite politeness, and in accordance with ever more and more elaborate rules." Henry Wotton's phrase that "an ambassador is an honest man sent to lie abroad for the good of his country" was widely believed; and Bismarck added that the best way to deceive was to tell the truth.

Ambassadors, theoretically the personal representatives of their sovereigns, were expected to put on a show of pomp and generosity, to live well and to entertain lavishly. Their correspondence with their governments was replete with pleas for money on the grounds that they were being ruined by their social obligations. Clearly, though the practice of politeness may have declined, certain other diplomatic practices and problems have persisted into our own era—consider modern espionage, our isolation of unfriendly diplomats in a Cold War, the squabbles over minks and Oldsmobiles, and our own State Department's eternal quest for larger representational allowances.

The most radical change introduced into the practice of diplomacy in many centuries came with the invention of the telegraph. Suddenly the diplomat, heretofore separated from his capital by weeks of travel, was instantaneously brought into contact with it. Then came telephone, typewriter, stenographer. Tradition-conscious diplomats resisted them all. Even today some elderly

diplomats abhor the telephone and draft dispatches longhand. But theirs is a lost cause. There came a day at the League of Nations in Geneva, soon after the signing of the Treaty of Versailles, when a brash local photographer named Jullien arose in a gallery, shouted "Attention, messieurs!" and took a picture. M. Jullien's peremptory command to the most august assembly in the world was only another beginning. Around 1925 the League of Nations introduced microphones and amplifiers into its proceedings, and in 1936 a simultaneous translation system was set up in the League Chamber. Diplomats had to learn a new technique of oratory or suffer their talents to be distorted or unappreciated.

The United Nations Chamber of today is a technician's paradise, with an "eggcrate" ceiling for the even distribution of light, wiring for cameras and sound, and glass cages for translators, cameras, radio commentators and engineers. Now diplomats must adjust to the final intrusion—television. They must learn how to be seen as well as heard, to suppress little habits that their colleagues would overlook but which become ridiculous on the television screen; they must, in short, become actors.

As the new techniques invade diplomacy, the courtly manners, elegance, and discretion of more relaxed and leisurely times begin to fade. We find Lord Vansittart, the eminent British diplomat, lamenting departed graces and deploring the new diplomatic mores in the pages of *Foreign Affairs*. "I began my job forty-seven years ago," he writes, "and it was a fairly gentlemanly one on the surface. 'The rapine underneath' was there, but it was . . . war in lace." That was before President Wilson made himself philosopher of a new diplomacy, with his "open covenants . . . openly arrived at." Wilson's aim was to foster democracy, to prevent the abuses of a secret diplomacy beyond the control of the people. And in World War I he appealed, openly enough, directly to the German people and over the heads of his own diplomats, in the hope of preventing bloodshed.

President Wilson might be said to have engaged in "popular diplomacy," a form in which Winston Churchill and Franklin Roosevelt excelled during World War II, with their messages to the peoples of other nations. But they com-

bined it with what might be called "VIP (very important persons) diplomacy," regularly ignoring their own and other countries' ambassadors and addressing themselves directly to their opposite numbers, or other important persons, abroad. The latter practice, of course, went against Wilson's "open covenants . . . openly arrived at." It offered a maximum of opportunity for secretiveness in international relations and brought forth such mixed blessings as the Yalta and Teheran agreements.

The wartime and postwar activities of the Office of War Information (later the United States Information Agency) and of the various foreign aid agencies now combined in the International Cooperation Administration might be regarded as extensions of "popular diplomacy"—as "diplomacy by propaganda" and "diplomacy by foreign aid." These forms are now regarded as indispensable to our foreign policy, not so much because we or the other Western powers prefer them, but because we must compete with the Communist bloc. We have become involved in a contest of "one-upmanship."

Unfortunately, the Soviet Union seems most often to be "up." Nikita Khrushchev has given a virtuoso demonstration of "VIP" plus "popular" diplomacy in his long, contentious, and colorful series of letters, ostensibly addressed to President Eisenhower and other heads of government but in fact meant for the public. Even before these letters have been handed to President Eisenhower—even before they reach Washington—Kremlin authorities often turn over the texts to Moscow Radio and the Tass News Agency for dissemination to their real audience, the people of the United States and the world at large.

Khrushchev's antics, his huffing and puffing, his jokes and fables, personify a vast effort in propaganda and economic competition, through the news columns and the world's press, by radio, by exchange of persons, by cultural missions, by trade fairs, by mass publications and translations, by a network of politically motivated trade treaties and by spectacular foreign aid credits and projects.

Finally, we must consider one more diplomatic form: "diplomacy by parliamentarianism," an extremely fatiguing exercise that may be observed at the United Nations. To be sure, some business is transacted at UN sessions, but by and

large the diplomats' energies are spent making speeches, speeches intended to set their countries in a good light, speeches which are ground out by the bale to the satisfaction of their respective foreign offices, but speeches to which the world pays little heed.

And of course there is the practice of espionage—in certain circumstances even sabotage. Every few months an American or other Western diplomat, usually a military attache, is expelled from Moscow or from one of the satellite capitals. Washington responds with similar expulsions. Only rarely does either side indicate the charges. But we may assume that each side seeks to weed out the other's better agents.

Diplomacy in our times, at least as between East and West, is war—carried on by other means. We like to think that our stratagems are more gentlemanly, less cynical, than theirs and will for that reason prevail. But it would be difficult for the time being to argue that our stratagems are the more effective.

It will not help to deplore the Soviet diplomatic methods or to call upon the Russians to return to the secret diplomacy of another era. Mr. Dulles is no more likely to persuade the Russians to abandon their public diplomacy than he would be able to persuade department store owners to merchandise their goods through country stores. The Russians know where they are likely to do business most effectively. When he protests the Russian techniques, Mr. Dulles is a little like an actor deploring the decline of the legitimate theatre. After silent movies, the talkies, and now television, the theatre will never again be what it was at the time of Sarah Bernhardt. Nor will diplomacy revert to the methods of a pre-totalitarian era.

We now need a new kind of diplomat; the traditional American diplomat will not do. In the old days American diplomats were drawn from a particular social stratum and educated in a restricted number of institutions. When they went abroad, they naturally sought out persons like themselves. They talked with government officials and moved among the ruling classes. But their contacts usually went no further. Many of these men had splendid educations and broad cultural experience. They were what the State Department calls "generalists," able to turn their tal-

ents in any direction.

The ambassador of today must of course still have the broadest possible knowledge and exquisite tact, but he must work with a team of specialists of a kind quite unknown to the old diplomacy. These specialists must be able to examine with professional skill the most varied facets of a foreign country's life and must of course understand the equivalent facts of American life. Thus, in the American embassies of 1958, the secretaries in economics, in labor, and in cultural and press affairs may do quite as necessary work as the secretaries doing traditional political reporting. The ambassador and his secretaries must also keep in touch with the opposition as well as the ruling party. They must, in other words, immerse themselves in the country's life.

Most of these requirements were synthesized in the Wriston Report of 1953 on State Department personnel—a document whose influence on recruitment, examination procedure, and training in the Foreign Service Institute is even now creating the new American diplomat.

No longer will he necessarily be the product of an Ivy League college. The State Department is sending out recruiting teams to the Midwest, the South, and the West, visiting small colleges as well as big state institutions and acquainting young people with the employment offered by the United States Foreign Service. The point of these missions is to obtain a wider geographical and social distribution of candidates, to bring about a transfusion from Main Street to the ranks of American diplomacy. Main Street is responding. Never before have there been so many candidates for examination. The adverse publicity spread by the McCarthyite investigations, implying that the Foreign Service was somehow contaminated with "pinkos" and homosexuals, has not prevented young people from responding to the romantic prospect of engaging in international politics in foreign countries.

The effect of the new practices may easily be seen: in 1954, before the Wriston Report, 1,261 applications were made for entry into the Foreign Service; in 1955 the number rose to 9,898, and in 1956 to 12,595. From January of 1946 to September of 1952, 25 per cent of junior appointees were Harvard, Princeton, and Yale men. This percentage dropped to 17 per cent by 1956,

while the geographical source shifted westward and southward.

The old examinations for the Foreign Service required extensive special knowledge of diplomatic history and international law, combined with knowledge of foreign languages and a first-class general cultural and social background. The candidate had to be able to set forth his knowledge in well-organized essays. The new examinations, introduced as a result of the Wriston Report, require a minimum of written answers and rely heavily on "true-false" and multiple choice questions. Today's applicant is being selected for a service embracing a wide range of activities, of which political reporting and analysis is only one. The new examinations make it possible to explore more thoroughly a candidate's basic intelligence and fund of fact than was possible with essay questions. The idea seems to be that if a man is lacking in particular knowledge—let us say of American history or economics or foreign languages—but can demonstrate the ability and intelligence with which to learn, the State Department may find it worthwhile to take him in and teach him.

He is taught in the Foreign Service Institute, a venerable institution, long neglected. It has been refurbished and expanded with a series of courses for junior officers just setting out, for middle-grade officers, and for seniors. The young man from Kansas City who has no knowledge of French, the literature major from Columbia University who never studied economics, or the business school graduate who would like to qualify for political reporting may all find chances to round out their educations. At higher levels there are opportunities for specialization in history and political science and the study of particular countries. Even the wives of Foreign Service officers are urged to take courses.

In some respects diplomacy seems to have come full circle since ancient times when prince addressed himself to prince without benefit of diplomatic intermediaries. That is, after all, just what Mr. Dulles prides himself on doing. That is what President Eisenhower attempted when he gathered the presidents of the American republics together in Panama. And that is the supposed virtue of summit conferences. President Eisenhower believes there is much to be gained

from knowing personally the heads of government of other countries. He has often explained that when two reasonable men sit down together, the difficulties that have loomed large in correspondence may suddenly evaporate.

And so the professional diplomat, once an intermediary between governments, may be demoted to the handy expert, whispering into the ear of his minister; he may become a mere messenger boy carrying documents between the State Department and another country's foreign office. The State Department can direct his every move, leaving him no latitude for judgment. Worse still, when a crisis arises, the State Department can rush in a higher-ranking officer from Washington. Consider, for example, the recent mission of Deputy Undersecretary Robert Murphy to Lebanon. After being personally instructed by the President and Mr. Dulles, he was rushed aboard an Air Force jet tanker, arriving in Lebanon to all intents and purposes to displace Ambassador Robert McClintock.

But an able ambassador may still exert decisive influence. The breadth and wisdom of diplomatic reporting will in many cases determine the success of our efforts to compete with the Soviet Union. While the independence and authority of the diplomat abroad may have been reduced by the swiftness of communication with Washington, the need for swift and informed decisions and policy formation in Washington has become greater. And under the system of integration and rotation introduced after the Wriston Report, the diplomat serving overseas today can be sure of being transferred again in a very few years to the center of power in Washington.

It looks as though, in time, the State Depart-

ment may succeed in raising a new brand of diplomat. He will lack the grace of speech and manner cultivated by the older school of diplomacy. Wealth or family prominence will be considered unusual. He will be a specialist, more often than not, either in a particular subject or a particular function. This much is certain.

But he will also have to be able to master the new skills and manners demanded by modern communications. He need not emulate Mr. Dulles, flying one week to London for a Baghdad Pact meeting, the next week to Brazil, all the while conducting—by radio and cable, from airplanes and borrowed offices—complicated negotiations with Eastern and Western officials about a summit conference, keeping the President informed himself, and in spare moments acting as foreign policy spokesman and propagandist. Mr. Dulles' activity is an interesting example of the diplomacy made possible by modern communications. But it demonstrates abuse by excess.

The new diplomat must on the one hand have a specialty. But his other requisite traits and skills would have staggered his predecessors: he must be able to negotiate at the foreign ministry and also to perform as propagandist; he must be able to draft a note and appear on radio or television; he must be articulate, quick in his responses, sensitive not only to the atmosphere at the Foreign Office but also in the street. He must convey to his government not mere information but intelligence in the highest sense, synthesizing the work of other specialists in a form communicable to the members of Congress and to the public by the extraordinary devices of communication which loom at his disposal. More than ever, he will have to be something like a complete public man.

HOW THE GOVERNMENT "BUYS" UNIVERSITY RESEARCH

by LAWRENCE H. O'NEILL

Good scientists and science can't be purchased in the same way that tanks and planes are. But does the Government know it?

The multiplication of government-sponsored research laboratories in American universities is one of the striking facts of modern academic life. In a bumper year, fiscal 1957, the United States government agreed to provide \$384 million for the support of scientific research in or connected with educational institutions. Almost 70 per cent of these government funds were provided by the Department of Defense and the Atomic Energy Commission.

Although everyone knows that much useful research goes begging for support, it's clear from these figures that Federal funds are a mainstay of academic research in our time. Research holding promise of some military application occupies a sizeable number of scientists and engineers in American colleges and universities. Inevitably, financial support in such an amount must forcibly affect not only the work it pays for but indeed the pedagogical and other intellectual affairs of the institutions receiving it.

This almost total financial dependence of university researchers on military and other national security agencies has concerned academic people a good deal recently—they are concerned that the independence of faculties and their

schools may be unfavorably affected by such things as security restrictions on open publication of research results, the nonintellectual requirements imposed on researchers by clearance procedures, and the diversion of labs, men, time, space—and even money—from instructional uses. There is, in fact, a growing and understandable desire on the part of many academicians to avoid risky ventures involving Federal support, to forego them entirely. How they may be risky we shall see presently.

But abstaining from research projects which might be harmful to other academic pursuits is not, unfortunately, always possible. There is no obvious dividing line between projects which may be called appropriate or inappropriate to a university. This is implied by the prolonged failure of scholars to converge on a definition of "basic" research. Not only are there differences from one discipline to another in what is viewed as fundamental, but there is frequently no common opinion on the matter within one field. Broad, searching investigations seeking knowledge for its own sake and those striving to achieve "practical," describable ends have a way of meeting and crossing. The artificial satellites were launched by very practical techniques. Their orbiting motions are in accordance with mathematical descriptions formulated three centuries ago. Nevertheless, they are revealing to us much that we had never known before about the region beyond our atmosphere.

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The vast increase in magnitude and complexity of university research programs (almost all supported by the Federal Government) and the consequent alteration in the quiet, reflective atmosphere that has usually surrounded and fertilized university research have deeply disturbed many scholars. For one thing, there is a justified fear that the lone inquirer, working without ostentation or the sponsorship of the AEC, will suffer in comparative prestige and recognition even within the universities. On the other hand, R. G. Folsom, in a recent article in *American Scientist*, calls attention to the changing methods of science itself:

Over a long period of years it was possible in the physical sciences for a single individual to make significant contributions to knowledge with baling wire, sealing wax, and wood, or even with just paper and pencil. [Now] in many areas of engineering and the physical sciences, the phenomena studied are so complicated that the individual is frequently seriously handicapped [by a] lack of knowledge in specific areas or of expensive and complex equipment. In such cases the research is done by a competent team. A measure of the trend toward team approach is the increasing number of technical publications with multiple authors. The academic institution, to have [a] staff engaged in significant research, must seek outside support because available funds for such purposes are generally inadequate.

It appears, then, that if the universities are to be effective participants in the great scientific and technological explosion which Columbia's Charles Frankel calls "the third great revolution of mankind," and if they are also to preserve and protect the detachment of the individual, which is the central academic asset, they must learn to walk with great wisdom among hazards of a kind they have never known before. As Henry Kissinger commented in a recent book, "Nostalgia for a more secure and less cataclysmic past is understandable. But facts cannot be changed; they can only be used."

Somehow, more consistent ways must be found to sustain the vast and important inquiries which can only be supported by the Federal Government—without trampling underfoot those whose contributions to knowledge must come out of quiet meditation. There is no intrinsic conflict between these two kinds of scholarship. But ill-advised government policies controlling research support can create one. For this reason it is imperative that universities themselves follow well-

considered policies in *accepting* government research support. Beyond this, it is necessary for the universities actively to guide and influence government research procurement policies.

In the hand-wringing days after Sputnik, the United States seemed to experience a sort of titanic New Year's Day as Americans determined to "improve." We were to turn from past folly in education and research. Never again were we to place automotive luxury above good schools. The release of intellectuals, en masse, from the doghouse was to take place forthwith. Science, especially basic science, was to be given its head. Woe to that bureaucrat or budgeteer who got in the way.

In those few weeks, university people experienced—and expressed—feelings of triumph because the importance of the intellectual had at last been so clearly demonstrated. Mixed with this was their fear that demands would arise for an erroneously or too narrowly defined kind of scholarship. Many hastened to point out that the successful launching of a satellite was not an achievement in basic science. Others cautioned that civilized life could not subsist on science alone.

Now, a year later, it is apparent that both triumph and fear were premature. Nothing much has really happened in the aftermath of Sputnik. To be sure, there has been a certain amount of organizational reshuffling, and some projected Federal budget cuts (estimated at about \$5 billion) have not been made. But surely nothing like a great national effort to achieve unmistakable scientific and technical leadership has been set in motion. The responsibility for this falls mainly upon those officials of government who are supposed to provide at least political leadership to the nation.

But the academic community also has much to account for. When the American people were stunned by the discovery that their neglect of intellectualism in technology had cost a great price, university people also failed to agree among themselves upon how the nation should respond to Sputnik—upon what should be done, and how. As a result, much of the post-Sputnik comment originating in learned circles came to be viewed as mere self-righteousness, as opportunism, as an attempt to exploit a national

humiliation for narrow, selfish purposes. This is the opinion one runs across among at least some government officials responsible for the procurement of research services.

Where do the difficulties begin?

It is understandable that the armed forces, in commissioning research, view it as a means through which they will be better able to discharge *their* assigned missions. Regardless of how laudable the purposes of a projected research program may seem to the scientific community, irrespective of how sensible a decision within a research effort may appear to be, those responsible for administering government support of such work are obligated to base their official actions on an honest estimate of how well the work serves the purposes of *their agency*. This is of course the central obstacle to harmony between the university view of research and the military view. When an agency's objectives in research are matched to those of the university, all major conflict disappears. Such has been the happy case with a number of research contracts granted by the Office of Naval Research, the US Army Office of Ordnance Research, and the US Air Force Office of Scientific Research—contracts amounting to agreement to support the research of a professor and his students with only the very broadest specification as to what the research shall be. For example, one Columbia research contract states simply that research into the general subject of "elasticity" shall be conducted within a wide range of instances—but that the allowable areas of inquiry "shall not be limited to these."

But many kinds of research require a good deal of time, great numbers of mature workers, and enormous expenditures for equipment. In some cases, even small projects require the use of facilities that could never be fully supported on university budgets alone—the use of a large computer, for instance, to carry out calculations that would be prohibitively long or laborious without special equipment. The typical charge to lease a modest computer is about \$60,000 a year. Add to this substantial costs for the salaries of a maintenance and an operating staff. Obviously, a small contract intended primarily to pay the half-time salary of a professor and two or three research assistants could never sustain more than a small fraction of the cost of

such a facility. Unless the computer can be largely supported on funds obtained through large contracts, the alternative is to do without the computer or to pay for the occasional use of a commercial service, with all inevitable formalities and delays.

To understand the scope and complication of some of the research now going on in American universities under government sponsorship, we might consider a not altogether exceptional project in electrical engineering at Columbia: a radar project now being pursued there requires advanced work in the techniques for generating a radar signal of carefully controlled characteristics, a much improved technique for receiving it when it returns, a major increase in the speed with which computers can describe the returning signal, and a fundamental investigation of the properties of certain types of radar components. The latter inquiry alone requires expert work not only in electronics but also in mechanics. In addition to the work I have described, psychologists are studying certain interpretation capabilities of human beings as a part of this same vast project.

Many people are needed to treat such a wide range of problems and to maintain an adequate flow of information, judgments, and suggestions throughout the research staff. Many aspects of this project require experimental study or the verification of theoretical predictions. This, in turn, means that large laboratory facilities and even more supporting staff members are needed. One experimental study involves transmitting signals northward and observing the detailed properties of reflections from the aurora borealis. Merely to do this, it is necessary for Columbia to employ the complete facilities of the Edwin H. Armstrong Laboratory at Alpine, New Jersey—and to employ men to run it.

Any large project, even when its major goals are quite practical, if it is worthy of a place in a university, uncovers all sorts of fundamental scientific problems. It is proper, necessary, and entirely practical to lift such subproblems out of the main stream of a large project and set them aside for independent study. History is so rich with cases in which the ancillary results of research proved to be the ones of enduring importance that failure to pursue fundamental questions when they arise can only be viewed as

maldirection of the work. In just this manner, then, every good research laboratory develops a list of enticing investigations that might be carried out but for which staff and facilities are not at the moment available. It is largely from these that the research programs of the future are built.

But under typical military procurement procedures, no responsibility is assumed by the government for the continuity of a research laboratory. Contracts usually offer one-year terms with no commitment that support will be provided beyond the contract term. There may be—and usually is—an informal understanding that no sudden termination of support will occur. Or not if the agency with whom one is dealing can *prevent* it. But the fact is likely to be that that agency cannot itself give final assurance that funds will be available after higher headquarters, review committees, and officials having no personal contact with the work make up *their* minds.

Funds, including those used to support research, are authorized and appropriated annually by Congress. Thus, in a real sense, the Department of Defense at least shares the annual uncertainty of its university research contractors. There is a complete separation between the government officials responsible for maintaining and understanding research and those with financial and legal control over research contracts. Add to this the fact that large-scale research support must be justified in the light of the current military purposes of the armed forces.

Good university research laboratories are built slowly and painfully over years. Irrespective of the fate of its work, a significant national asset is lost when a research group disperses because money to support it could not be provided in time. It is neither fair nor reasonable to expect universities, with their already strained finances, to "carry" a large and expensive organization while awaiting the uncertain outcome of a cumbersome government procedure. Nevertheless, during the days in late 1957 when the Air Force was struggling to hold its expenses within authorized limits, many universities, including Columbia, were asked to continue research programs but to delay their claims for reimbursement for painful lengths of time. In such a situation, the procurement regulation

that refuses to recognize interest on borrowed money (borrowed by a university to sustain a laboratory) as a reimbursible cost is a sort of last ignominy.

To be sure, Congress does make available funds that can be committed for terms longer than one year. But the practical fact is that, faced by annual budgetary uncertainty, the armed services, who distribute much of the money, always attempt to limit the duration of their own commitments in order to be able to accommodate themselves in a budgetary crisis. Unless Congress acts to the contrary, the armed services will continue to retain the freedom to decide which laboratory survives and which dies on the basis of program priorities at the time a budgetary crisis occurs. This by no means assures that the most valuable laboratories will survive. Military priority and scientific necessity are not identical—in anyone's mind.

The separation of scientific knowledge and financial responsibility is fundamental to government organization in these matters. But so long as financial decisions are made by officials whose only obligation is to assure the financial cleanliness of a contract and who have no responsibility whatever for the scientific results produced under that contract, we may expect that almost all financial and administrative decisions will be made in a way that affords maximum protection to the official making the decision. Since the government seeks to obtain the best possible research work, this arrangement can be damaging both to scientists and to the government.

To be sure, I have known contracting officers who showed far greater zeal than their scientific counterparts in the government service for obtaining the best possible research return. However, it hardly seems fair to expect such men, trained as they are in finance rather than science, to make judgments involving subjects for which they have no extensive background.

The policy of justifying research projects by an estimate of their utility in meeting military objectives raises a fundamental issue: whether military objectives as perceived and defined by military authorities are an effective guide to the best military return from research. The needs of an automobile purchaser are not synonymous

with talent as an automobile designer or production expert; it may well be that the need of the military for the fruits of research does not amount to an adequate qualification to direct that research.

It may be argued that it is precisely the responsibility and right of the armed services to define the military hazards for which we must prepare. Conceding this is not at all the same as conceding that control of research must be in military hands. It is perfectly clear that neither a military hazard nor an effective means of meeting it can be described until scientific knowledge and technical art have told all of the possibilities.

The trouble with research dominated by its user is that it tends so strongly to view possibilities in the light of present certain knowledge. It is restless and impatient under the pressure of present needs, and the temptation is very great to put off until a less anxious time the work on which no payoff can be guaranteed.

On the other hand, the problems of national security are real. The very lives of the people of the United States are at stake, together with moral, political, and social values evolved in pain over many centuries. It is unreasonable to expect that scientists and engineers will be permitted to go their way in research as if the nation were not seriously threatened. Researchers must certainly rank their obligations as citizens before mere professional preferences.

This does *not* mean that fundamental research should be pushed aside to make way for applied science, nor does it mean that the military forces should continue to control the major part of research. It does mean that researchers should show a respect for the opinions of their fellow

men, and take the trouble to explain why many things that look like intellectual fiddle-faddle—even when they sometimes turn out to be intellectual fiddle-faddle—must be tolerated to bring about the advances in knowledge upon which our safety and happiness so importantly depend. Just as our system of justice accepts the risk that some of the guilty will go unpunished in order to be as certain as possible that no innocent person will be unjustly punished, so we must accept a certain amount of intellectual backing and filling in order to be as certain as we can be that the brilliant mind is not suppressed whose notions strike less imaginative men as useless.

Military control of research doesn't necessarily lead to intolerance and enforce the narrow view. But it is apt to. Every good soldier accepts the ultimate authority of the established order and the formal rules. It is the business of the researcher to be irreverent, to be ever curious, to wonder if things are as authority says they are, to wonder if the things could be better, and to say so if he is convinced he is right. It could well be that there is a basic psychological incompatibility between the mind that accepts and respects military tradition and the skeptical scholar's mind.

We have long since passed the point where a clear separation could be drawn between civilian and military functions in building the nation's strength. A university engaged in the training of students and the accumulation of knowledge through research is an instrument for national security in quite as full and direct a sense as an Army division or an Air Force wing. We should stop "purchasing" university research under a structure and a set of rules only slightly different from those we use in buying trucks, tanks, and airplanes.

I've Been Reading

*Of Science, Time,
and the Cleveland Public Library*

by POLYKARP KUSCH

A friend of mine, a librarian—I have some minor predisposition to friendship with all librarians—asked me if I “have time” to do any reading outside of physics and the technical literature. Strictly speaking, the question is unanswerable. With a sufficiently compelling interest, anyone can find time for reading—reading for pleasure, stimulation, or amusement. The question, then, was really whether or not I, as a physicist, have a curiosity about new ideas, an interest in new interpretations of human experience, or can simply derive enjoyment from things said in a new way about man and his state. The question is still a little disturbing: it evokes the picture of the physicist as a man exclusively concerned with the rather limited portion of the universe that is traditionally his field of inquiry, with little or no

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interest in, for example, the condition of society and the world of feeling and perception.

When the FORUM's editor asked me to write the essay “I've Been Reading” for this issue, I welcomed the opportunity to show that the scientist is not exclusively preoccupied with that aspect of science which is described in the highly stylized pages of the research journals. There are, of course, able scientists whose intellectual horizons do not extend beyond a specialized field, just as there are classicists whose intellectual contact with the world does not extend beyond the time when Latin ceased to be the primary language for the communication of ideas. But neither that scientist nor that classicist is typical, and I see no present merit in debating the altogether too common assumption that the scientist knows only science. But herein lies the reason why a scientist was brought to write this column.

I was a student at an engineering school from 1927 to 1931, an era long before the time when instruction in the social sciences and humanities became an important part of the education of prospective engineers. Nevertheless, I believe that I received a good education. The value of astronomy, geology, and mathematics as food for the mind cannot be overestimated. I look back with respect, if not with pleasure, even on a course with the dull title “The Design of Cams and Gears.” The course was, indeed, thoroughly dull, and I could not now design a cam or a gear. Nevertheless, this course contributed to my understanding of mechanisms and to an ability to deal with some important aspects of the physical world.

For a year prior to my entrance to the engineering college, and throughout my college career, I had worked at the Cleveland Public Library, mostly as a part-time page. My present belief is that this long-time activity contributed to my education no less than did my college work. I met and knew well numbers of librarians. Many of them were women of charm and grace. Some treated books as they would groceries, but others had a real love for them. I mean a love not only for the content of books but for the feel and smell of books, perhaps even for books as a tremendous cultural phenomenon.

My fellow pages were drawn largely from the colleges and universities of Cleveland. Most of

us were undergraduates, but there were students from the professional schools as well. We were young and energetic and filled with enthusiasm for all kinds of things. Several of us certainly thought of the library as an intellectual home quite as delightful as our campuses. I can think of two of the pages from my time at the library who became librarians themselves, and one of them subsequently served a term as president of the American Library Association. On the very rare occasions when I return to Cleveland, I am more likely to visit the public library than the campus of the Case Institute of Technology. The library has to me an endearing quality of permanence — the same books, the same smell of books, the same intent readers, and almost the same boys pushing trucks of books. The Case Institute, like many colleges, has been transformed almost beyond recognition since the War, and I fail to find on its campus the same sense of a continuing world that I can find in the library.

In any event, I shelved books for five years, principally in the Sociology Division. I still recall not only the general classification scheme but the call numbers of specific books—an obscure legal periodical called *The Green Bag* is 347.52-G82, unless it has been reclassified. In my senior year I took a course in economics, and my instructor, in the time-honored way of all instructors, devoted the first class period to a discussion of source materials. Among others, he proposed the *Annals of the American Academy of Political and Social Science*. This, he told us, was a monthly periodical. With less than mature judgment I insisted, even in the face of stubborn resistance, that it (306-Am3) was bimonthly. I regret that it took me many years to re-establish my faith in the science of economics; and my trust in certain academic pretensions had been permanently impaired.

The most important thing about the library was books. At first, at the age of sixteen, I read them ravenously, indiscriminately, but gradually I developed a taste of my own—however I might deplore it now. I learned to read rapidly and found an enormous joy and stimulation in books. Even the final examination period in college did not stop me from reading.

The battle between a fundamentalist protes-

tantism and a modern liberalism was at its height in the late nineteen twenties. The questions raised at the Scopes trial by the defenders of a rational, scientific approach to knowledge and by the proponents of orthodoxy were of the greatest personal importance to me. One of the most impressive of the books I read which dealt with these issues was *The War on Modern Science* by Maynard Shipley (1927). The impact of the book on me was not so much through Shipley's knowledge and analysis as through the passion with which he approached his subject. One comment that I noted at the time I ought to repeat every year to my classes in physics: "Knowledge consists in understanding the evidence that establishes the fact, not in the belief that it is a fact." I learned to recognize, during a period in which I was privately engaged in a battle between commitments to revelation and rationalism, the large range of opinions that men of integrity may have; and I learned that the description of these opinions as corrupt, sinful, and destructive of all that is good does not, by itself, render them untrue, unwise, or unworthy of consideration.

Not so long ago, at the shore of a lake in New Hampshire, I read on the same general subject Andrew D. White's *A History of the Warfare of Science with Theology in Christendom*, a book originally dated 1895. Incidental to a detailed and documented study of the matter described by the title, the book gives a history of science itself and, perhaps more importantly, of the climate of thought in which science was cultivated and in which a very real warfare was waged. White is led to quote from a sermon delivered before the University of Oxford by John Henry (later Cardinal) Newman in the period when Newman was still an Anglican:

Scripture says that the sun moves and the earth is stationary, and science says that the earth moves and the sun is comparatively at rest. How can we determine which of these opposite statements is the very truth till we know what motion is? If our idea of motion is but an accidental result of our present senses, neither proposition is true and both are true; neither true philosophically; both true for certain practical purposes in the system in which they are respectively found.

White's comment on this is:

In all anti-theological [sic] literature there is no utterance more hopelessly skeptical. And for what were the youth of Oxford led into such bottomless

depths of disbelief as to any real existence of truth or any real foundation for it? Simply to save an outworn system of interpretation into which the gifted preacher happened to be born.

I think that the modern scientific mind would be less outraged by Newman's statement than were his critics at the end of the nineteenth century; it would concede that Newman had some prevision of ideas that have become basic to much of contemporary scientific thought. Currently the scientist who deals with the conceptual structures which describe nature and its behavior is deeply concerned with questions of reality and limits of "truth" and is rarely convinced that he has formulated an immutable verity. None of this is in any way condemnatory of White, who after all adopted the position of certainty that was characteristic of much of nineteenth-century science. My interest in White's study, especially as it gives an insight into the change of scientific climate in the last sixty years, was great; it was not, however, as passionate as my earlier interest in Shipley's study. I wondered why. Perhaps the war has been won; in any event, the last rear-guard action is not vigorously fought in the world in which I now live. Quite possibly it is my loss to have outlived the era of heroic battles.

I remember that it was possible for library employees to borrow mint-fresh copies of new novels for a weekend, before the volumes were catalogued and otherwise prepared for general circulation. I developed a taste for clean copies of books, and the present testimony to that taste is the monthly bill from the Columbia University Bookstore. The novels I read in those days were probably no better or worse than contemporary novels. I have tried to find copies in the Columbia University library of several that I remember—I could not, presumably because competent judgments found them ephemeral in interest and with no claim to a place in the American literary tradition. The rather remarkable thing is that I can remember the titles of some of these novels after a lapse of twenty-eight years, titles like *Sleeveless Errand* (1929) by Norah James (there is an *h* in Norah) and *Love's Illusion* (1930) by J. D. Beresford. Evidently these books, as well as many others, made a considerable impression on me. Some of my contemporaries, too, remember the pleasures of an earlier and almost unin-

terrupted reading of (even) inferior novels. But they and I, no longer young, have remarked on the apparent fact that novels are no longer what they were and that the pleasures of reading them are less than they were.

The reading of novels introduced me to unexplored worlds of experience, of emotion, of thought, of moral attitude, of social climate, and even of history. I don't think that I frequently mistook the reading of a novel for real experience except insofar as the reading was an exciting experience in itself. The novel served to show me some of the large vistas of life and perhaps created a longing in me to live in a world of many dimensions and aspects. Less than masterly novels may indeed serve very well to introduce the young to new worlds. In the headlong rush to taste and see life, subtleties of expression and depths of understanding are hardly perceived—and are hardly necessary—as one views the broad sweep of human experience. Subtleties become more important as the reader acquires more personal experience.

My pleasure in the reading of large numbers of contemporary novels has considerably decreased since my undergraduate years; I am much more demanding in my taste and will only rarely read a new novel that has failed to receive favorable critical comment. Even then I frequently regret the time that I have spent. Now I don't really believe that novel writing has deteriorated over the last thirty years; in any event, I'm not able to make a competent judgment of the case. My contemporaries and I have had a considerable experience of life over these years; we have lived through a depression and a social revolution; we have seen a war that, in 1929, seemed most unlikely ever to occur; we have each had some measure of triumph and disappointment. In brief, we have lived our own lives, perhaps much richer lives than we had any reason to hope for thirty years ago, and pictures of life are somehow not as immediately important as they were then. I think that I now read novels to interpret my own experience; earlier I read novels in search of experience. Perhaps as a physicist I can compare the difference to that between the spirit in which data are found in the laboratory to help in the formulation of a barely conceived idea—and the spirit in

which data are meticulously acquired to test the consistency of a well-formulated idea with all aspects of physical reality.

I don't intend to suggest that I no longer read novels with pleasure and profit. For instance, probably because of an extended experience of the academic world, I read novels with an academic setting more or less as they appear. I remember having read many years ago Hermann Sudermann's *The Professor's Wife*. My recollection is principally of the style, which was one of large and enveloping sentences; on the basis of my memory alone, I can't decide whether or not the academic world of Sudermann gave me a realistic foretaste of the world that I now inhabit. But I *do* inhabit that world, and I am quite certain that an important reason why I chose to do so lies in the books I had read. Very recently I have read Stringfellow Barr's *Purely Academic*. Here, I am quite sure, is a gross caricature of the academic world. It is perfectly true that academicians may be petty, fiercely ambitious, dishonest, intellectually superficial, and

even stupid. It is equally true that with all the faults of some individual members of the scholarly community, there is knowledge, perception, wit, and above all, intellectual passion in such generous abundance that I see the university as one of man's noble enterprises; one with conspicuous faults, but still not such a wholly tawdry organization as Barr would make it. Storm Jameson, in *A Cup of Tea for Mr. Thorgill*, also examines some of the weaknesses of the academic mind and temperament; in addition, she observes the subtlety of thought and emotion that characterizes more than occasional academicians and on the whole presents to me a world with a real relationship to mine and one which increases the dimensions of mine.

The difference between the novels I read more than a quarter of a century ago and those I read this year is that the earlier ones showed me a world which, through lack of knowledge, I could not even imagine. The more recent ones serve perhaps as a laboratory instrument which gives me a new insight into a world I already know.

For Future Remembrance

by Michizô Tachihara

Translated by Donald Keene, associate professor of Japanese

The dream always returns to that lonely village at the foot of the mountain
—Winds stir in the nettle leaves
And crickets endlessly pipe—
Along a road through a wood silent with early afternoon.

A brilliant sun shines in the blue sky, the volcano sleeps
—And I,
Though I know no one listens, go on talking
Of things I have seen: islands, waves, headlands, sunlight and the moon.

The dream never goes beyond that point.
I will try to forget everything, utterly.
When I have forgotten even that I have completely forgotten,

The dream will freeze amid recollections of midwinter,
Then open a door and leave in solitude
On that road lighted by scraps of stars.

Columbia

CHRONICLE

A concise review of recent news from Columbia University

Twelve out of fifteen atomic blasts reported set off by the US Government since 1954—some as far away as the Marshall Islands—have been registered on seismographs at Columbia's Lamont Geological Observatory. Some of these are unique among long-distance recordings. The seismographic record coincided with the specific dates and times of atomic tests in Nevada and the Pacific released by the Government shortly after the recent discussions at Geneva of methods for detecting nuclear explosions. Waves set off by surface and aerial tests are transmitted over the earth's crust, as are earthquake waves, and caught by the seismographs. Of the three US test explosions not recorded at Lamont, one occurred while the seismographs were turned off, earthquake waves interfered with detection of another, and the third was carried out underground.

A former Columbia College student who was suing the University because it hadn't taught him "wisdom" saw his case dismissed from court this summer. The presiding New Jersey judge observed that "wisdom cannot be taught, if indeed it can even be defined." The student told the press he would appeal, apparently maintaining that the College misrepresented itself as being able to "teach" that quality.

The University's building plans now definitely include a new eight-story home for the Graduate School of Business. It will be built on the site of University Hall, a structure which has remained unfinished beyond its first floor for several generations. The new building will allow for a 50 per cent increase in student enrollment and will house all the facilities of the Business School, including its 270,000-volume library.

The lower portion of University Hall, where the university gymnasium, swimming pool, and power plant are housed, will probably be left as it is; a new first floor will contain the business library, lounges, and administrative offices; the most-used classrooms will be on the second and third floors; faculty offices and work cubicles will occupy higher floors. The building is to be equipped with closed-circuit television and telephonic dictating equipment. The building's total cost is estimated at \$5 million. No date has yet been set for the beginning of construction.

Columbia's first residence hall for married graduate students will be opened in September, 1959. Plans have been made to renovate a six-story apartment building at Riverside Drive and 115th Street, dividing it into 65 one- and two-bedroom apartments, to be fully furnished by the University.

Another dormitory, for 600 Columbia College students, is now under construction adjoining Ferris Booth Hall, and a graduate men's residence for students in the Schools of Business, Engineering, and Law is included in plans for the "east campus" redevelopment project east of Amsterdam Avenue (see below).

The Law School will soon have new quarters east of Amsterdam Avenue between 116th and 117th Streets. Construction is expected to begin during this academic year on the new eight-story, seven-million-dollar Law building, coinciding with the Law School's centennial celebration. The new Law School will thus be the first structure to rise in the projected "east campus" development; this group of buildings will occupy the area bordered by Amsterdam Avenue, Morningside Drive, 116th Street, and 118th Street. The east

campus will be connected to the rest of the 116th Street campus by a wide, landscaped crosswalk over Amsterdam Avenue. The street floor of the Law building will contain classrooms and a Moot Court room; up one floor, the reading room of the Law Library will face the crosswalk's landscaped terrace. The reading room will be divided into small units conducive to maximum quiet and privacy.

Brander Matthews Theater and East Hall, former headquarters for the Schools of Dramatic Arts and Painting and Sculpture respectively, are being demolished to make room for the new building. Expanded facilities for both schools will be provided eventually in the University's proposed Arts Center; meanwhile, temporary accommodations have been found for them elsewhere on the campus.

Local botanists have found that nicotine, the poison in tobacco, is formed by the tobacco plant out of the valuable B vitamin, niacin. This regrettable conversion takes place during the plant's normal growth, but for no purpose useful to the plant, as far as these researchers have determined. Botany Professor Ray F. Dawson and a team of Columbia University and Brookhaven National Laboratory scientists are pursuing their inquiry further, using radioactive isotopes to trace the versatile substance, nicotinic acid, which begins as a nutrient and achieves such a bad end.

Leonard Bernstein, conductor of the New-York Philharmonic, was awarded Columbia's Alice M. Ditson Prize "for distinguished service to American music" this spring. The \$1,000 award is given annually to an American composer or conductor. Mr. Bernstein is the composer of the Broadway musical productions "Wonderful Town," "Candide," and "West Side Story," as well as the ballets "Age of Anxiety," "Fancy Free," and many concert works. He is also widely known for his television lectures on "Omnibus."

Cancer researchers at Columbia have invented a unique cell-growing machine in which clusters of cancer

Deans, coming and going . . .

Here is a summary guide to new and former deans on the University campus, following a year of multiple moves and changes:

The new Dean of the Graduate Faculties is Lawton P. G. Peckham, former chairman of the graduate department of Romance philology and French and a specialist in medieval French literature. He succeeds Jacques Barzun, appointed in March as Dean of Faculties and Provost of the University [see Spring 1958 issue]. Dean Peckham, who came to Columbia in 1946, is a graduate of Brown and Princeton. He brings with him as assistant Kevin Sullivan, a former instructor of English at Columbia College and a scholar in the works of James Joyce. Among Mr. Sullivan's duties will be liaison work with Graduate Faculties alumni and publication of an alumni newsletter.

John Gorham Palfrey, formerly of the Law School, has been appointed Dean of Columbia College. Dean Palfrey came to Columbia as a lecturer in law in 1952 and four years later became a full professor; he has a special interest in the political and legal aspects of atomic energy. A graduate of Harvard College and Harvard Law School, he also spent two years at the Institute for Advanced Study in Princeton, N. J. Dean Palfrey succeeds Lawrence H. Chamberlain, who resigned last year to return to teaching. Dean Chamberlain will hold the Joseph L. Buttenwieser Professorship in Human Relations, established recently by alumnus Benjamin Buttenwieser in memory of his father. During 1958-59, however, Dean Chamberlain is completing a survey of the philosophy and practice of general education in the US under a grant from the Carnegie Corporation of New York. Dean Palfrey's new assistant will be George W. Hibbett, who replaces Charles C. Cole, Jr., now Dean of Lafayette College in Easton, Pennsylvania. Dean Hibbett has been an associate professor of speech.

Dr. H. Houston Merritt, chairman of the department of neurology, is serving as Acting Dean of the Faculty of Medicine and Vice President for Medical Affairs. Dr.

Merritt, who came to Columbia in 1944, is one of the physicians who attended President Eisenhower after his stroke. Although Dr. Howard D. Taylor, Jr., was appointed Dean this spring upon the retirement of Dr. Willard C. Rappleye [see Spring 1958 issue], he withdrew from the post on the advice of his doctors; he will, however, remain head of the department of obstetrics and gynecology.

Clifford L. Lord, a scholar in American history, is the new Dean of the School of General Studies. A graduate of Amherst and Columbia, he taught from 1936 to 1941 in University Extension, the forerunner of General Studies. Former director of the Wisconsin State Historical Society, he is president of the American Association of State and Local History and chairman of the American History Research Center. His assistant will be Mr. Arthur W. Brown, a General Studies graduate and former instructor who is now a doctoral candidate in the department of English and comparative literature. Professor Louis M. Hacker, who resigned as General Studies Dean last winter, will return to teaching in the economics department. He is on leave for the current academic year.

Jack Dalton, now director of the international relations office of the American Library Association, will take office next July as the new Dean of the School of Library Service. He is now abroad, completing a field survey of foreign libraries under a grant from the Rockefeller Foundation. Dean Robert D. Leigh, whose retirement was announced last June, will remain on duty for another year at the library school.

Robert J. Senkier has been named Assistant Dean of the Graduate School of Business; in this post he will supervise admissions and student affairs. Holder of a Columbia B.A. and M.A., Mr. Senkier was associate director of University admissions. Dr. Clara A. Kaiser is Acting Dean of the New York School of Social Work, currently replacing Kenneth D. Johnson, who retired last spring.

cells can be kept alive independent of any animal body over long periods of time. With the help of this device, which duplicates the combined functions of heart, lung, and kidney, scientists can observe all the mechanisms involved in the growth of cancer; from such observation they hope to discover the inherent weaknesses of cancer cells. The machine is known in technical language as a "continuous regulated cytogenerator."

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Ninety rare book editions and ten letters of Rudyard Kipling, 20 first editions of Mark Twain—including an

almost perfect "first" of *The Adventures of Tom Sawyer*—and 25 first editions of Edna St. Vincent Millay are among 343 valuable books and documents recently given to the Columbia Libraries by Mr. and Mrs. Soltan Engel of New York City. Other items in the collection are first editions of Louisa May Alcott's *Little Women*, Baum's *The Wizard of Oz* inscribed to the author's sister, and William Cullen Bryant's *Poems*; Carroll's *Alice in Wonderland* in two variants of its first American printing; a libretto of *Der Ring des Nibelungen* autographed by Wagner; and a copy of Whitman's *Leaves of*

Grass containing a letter from Whitman.

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A "chemical blanket" to prevent the evaporation of valuable water from reservoirs in dry regions is being perfected by Columbia scientists. Dr. Victor K. La Mer of the chemistry department has found that hexadecanol (cetyl alcohol), when spread over water in a protective layer one molecule thick, seals it off from the air efficiently enough to reduce evaporation by 50 to 65 per cent. The new process has been tested to good effect in the southwestern United States.
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States and Australia; its application costs less than \$5 a year per acre of water surface. Dr. La Mer and his assistants are now experimenting with several methods of application to determine which will best sustain the chemical blanket against erosive dirt and wind.

• Twenty-three-year-old Richard Gottlieb, a June graduate of Columbia's School of Engineering, headed the group of engineers who developed the separation device used in launching the first Vanguard satellite in March.

Plans for the device were worked out during the summer of 1957, while Mr. Gottlieb was working in the Naval Research Laboratories in Washington, D. C. When his superior was taken ill, Mr. Gottlieb temporarily replaced him, guiding production of the device to a successful conclusion in two weeks.

• Eight widely renowned Columbians retired from the University's faculty this past year: emeritus designations were conferred upon Allan Nevins, prolific historian and journalist and winner of two Pulitzer Prizes; Nathaniel Peffer, one of this country's leading authorities on the Orient, author of *White Man's Dilemma* and *Must We Fight in Asia?*; Leo Wolman, prominent labor specialist and author; botanist William J. Robbins, for twenty years director of the Bronx Botanical Gardens and past president of the American Philosophical Society; Dana W. Atchley, one of the nation's leading authorities on internal medicine; Kenneth B. Johnson, dean of the New York School of Social Work; Young B. Smith, dean of the Columbia School of Law from 1928 to 1952; and Arthur W. Macmahon, past president of the American Political Science Association and, recently, executive director of Columbia's Committee on the Educational Future of the University (see Spring 1958 issue).

• Sixty gifted high school students

from the New York City area are attending Saturday classes and conferences in modern science, mathematics, and engineering on the Columbia campus this term under the auspices of the Engineering School's Joint Program for Technical Education. According to Dean John R. Dunning of the Engineering School, "We are going to make it possible for these youngsters to get the kind of education they want when they are ready to take it, not when our sadly overburdened secondary school systems are ready to give it."

• Dr. George Braxton Pegram, pioneer nuclear physicist and University vice president emeritus, died in August; his passing was observed at Columbia in formal memorial services. When, a few weeks after his death, news was reported around the world of the successful tests of nuclear-powered submarines, a number of local people recalled the following story:

Early in 1939, Dr. John R. Dunning and Dr. Enrico Fermi, both then of the Columbia physics department, carried out an experiment described by one New York newspaper in the following way: "The largest conversion of mass into energy ever obtained by man, the creation of 100,000,000 electron volts from a shattered atom, has been accomplished by Columbia University's new 150,000-lb. atom-smashing machine, or cyclotron, Dean George B. Pegram of the Graduate Faculties announced yesterday." Shortly thereafter, the then Dean Pegram wrote to the Navy Department in Washington, telling them in detail the results of the experiment. "Just why I informed the Navy, I don't know," he said later. "The principal reason, I suppose, is that atomic energy seemed the answer to the persistent fuel problem of submarines, which have little storage space and must be able to remain submerged for long periods of time. The space problem might be licked by the use of atomic energy . . ."

